PHILOSOPHY

THE JOURNAL OF THE BRITISH INSTITUTE OF PHILOSOPHY

VOL. XVII. No. 65 JANUARY 1942

DUTY AND INTEREST—(II)

W. D. LAMONT, M.A., D.PHIL.

SECTION C. RIGHTS AND THEIR RELATION TO INTERESTS

32. *Real and Personal Rights.*—In different systems of legal nomenclature the term "right" has different meanings,[1] some writers applying it in a restricted, and others in a wider, sense. I shall use it in its wider sense as including "personal rights," "proprietary rights," "powers," "liberties," "licences," and so on. The precise meaning of these various kinds of right need not be discussed here, because all legal rights can be broadly divided into two main classes—"personal rights" and "real rights." As reference will occasionally be made to this broad distinction, a brief explanation of its character is necessary. According to Gloag and Henderson,[2] the difference between real rights and personal rights is correlative to the distinction between duties and obligations. Thus, if I have the full proprietary right in a certain article, including possession and use, this is called a *Real Right*; and I can make the demand against men in general, or "the world at large," that my possession and use should not be interfered with. The world at large owes me the *Duty* of non-interference. I may, however, lend my property to someone for a stated period; and at the end of this period I have the right that he in particular should perform the specific act of returning my property to me. Here it is said that I have a *Personal Right* against him, and that he has an *Obligation* to perform this specific act. A Real Right is thus a right in something (e.g. a proprietary right), a correlative Duty being imposed upon the world at large. A Personal Right is a right to some specific performance or forbearance on the part of someone in particular, a correlative Obliga-

[1] See Gloag and Henderson, p. 26.

[2] *Op. cit.*, pp. 24–6.

tion to perform or forbear being imposed upon him in particular. Most (if not all) duties demand non-interference; and most (but not all) obligations demand active performance.

33. *Pre-legal Elements in all Rights.*—We turn now to the main subject of this section, namely, the nature of rights and their relation to interests. No one will deny that a legal right owes something of its character to the existence of law. This is clearly implied in the very notion of "legal right." But it is essential to recognize that there is something in a legal right which is prior to law. Every legal right has a "nucleus" of an extra-legal character, and it is the addition of something, by the law, to this nucleus which erects it into a legal right.

It will help us to see what this nucleus is if we attend, first, to the incidence of the legal demands involved in a right. The existence of a right belonging to A involves *no* legal demands upon A. The demands all fall upon B, C, D, E, etc. *If* A wishes to do something falling within the bounds of his right, then he may do so; and B, C, D, and E, etc., are commanded to refrain from interference or perhaps positively to render assistance. A right is, therefore, something in the nature of a "field for free choice" plus legal demands upon the conduct of others. We shall have more to say about this "field for choice" presently. At the moment we are content to note that it is pre-legal in the sense that it is not created by law but is simply fenced in and protected by law.

The idea of a field for free choice easily directs us to the essential, positive nucleus in a right; it is something which the owner of the right may choose to do or be or possess—some object of "will," or "desire," or "interest." My right to occupy my house means that I am permitted either to do so or to refrain, as I wish; but, should I choose to do so, everyone is legally prohibited from interference. It may be said, then, that the creation of a right consists in the law clothing with its protection (*a*) a field for free choice with respect to (*b*) some presumed or actual interest. The logical procedure would seem to be to discuss first the notion of an "interest."

34. *Interest.*—What is an "interest"? The word has various meanings. One of these is "a business, cause or principle in which a number of persons are interested";[1] and it is roughly in that sense that I use the term. Thus, one interest of mine is the pursuit of philosophical study. Another is the receiving of my salary. To find a job is an interest for most unemployed men. To defeat his enemy is—normally—an interest of a commander in battle. It may be said, therefore, that an interest is an end, an object of desire or will, or something aimed at. But as "desire" and "will" may be very narrowly defined by some philosophers and psychologists,

[1] *Shorter Oxford English Dictionary.*

a wider term is probably safer. Possibly the psychical activity referred to should be called simply "conation." I shall therefore define an interest thus:

An Interest = An Object of Conation.

35. *Sphere of Autonomy.*—Not every possible or actual interest is kindly regarded by the law, but there are many interests which it does not discourage. While it does not command them, neither does it prohibit them. With respect to them it leaves to individuals a field for free choice. Now, so far as a man has this free field, he might appropriately be said to have a "liberty." The term "liberty" has, however, been customarily used to mark a certain kind of right; and what we are now speaking of is something anterior to the full notion of a right. Let us—to coin a term—call this "a sphere of autonomy."

A pure sphere of autonomy (i.e. the pursuit-of-an-interest's being neither commanded nor prohibited) which is not also a right (i.e. which is not protected by law) is probably difficult to discover in civilized countries. It is more easily found in communities where law and government are rudimentary, and where the principle of self-help holds extensive sway; for a mere sphere of autonomy is a province of behaviour *respecting which there is simply no law.* It is something respecting which there is neither command nor prohibition, nor is there any protection against interference from others.

But while the relation between a pure "sphere of autonomy" and law is a completely negative one, there is a positive relation between spheres of autonomy and interests; for the notion of a sphere of autonomy only becomes intelligible when considered in connection with the notion of an interest. It has reference to some state or condition in which you may wish to be, or to some activity in which you may wish to engage. It refers to some possible object of conation which you may pursue—at your peril. The law neither frowns upon nor encourages your purpose. The following may, therefore, be taken as a fair definition:

A sphere of autonomy = The pursuit-of-an-interest's being neither commanded nor prohibited by law.

36. *Right.*—The last two paragraphs have dealt with the pre-legal elements in a right. But we pass within the ambit of law when we speak of a complete right; for it is some kind of legal "protection" which erects a "sphere of autonomy" into a "right." The distinction may be better appreciated if we take a particular example—a right of way. There would be a "public sphere of autonomy regarding way" if there were no prohibition upon the public's passing over a certain tract of ground by a definite path, and also no prohibition upon interference with passage. There would be a "public right of way," on the other hand, if interference with passage were prohibited. The

legal protection of the sphere of autonomy is thus of the essence of the notion of a right.

37. *Some Proposed Definitions of Right.*—Unfortunately, jurists as well as moralists have failed to reach an agreed definition of "right." Salmond[1] says that a right is an interest recognized and protected by a rule. It is any interest respect for which is a duty and the disregard of which is a wrong.

This general conception of "right" is criticized by Vinogradoff[2] who would substitute "volition" or "power" for "interest." A rule of law, he holds,[3] is the limitation of one person's freedom of action for the sake of avoiding collision with others; and "what is limitation for one will is *power* for another." "We can hardly define a right better than by saying that it is 'the range of action assigned to a particular will within the social order established by law.' "[4] Gray[5] agrees, on the whole, with Vinogradoff.[6] "The right is not the interest itself; it is the means by which enjoyment of the interest is secured. It is the power to get the money from Balbus . . . which is the legal right, not the payment of the money. . . ."

According to Holland[7] a right is "a capacity, residing in one man, of controlling, with the assent and assistance of the state, the actions of others."

38. *Criticism of these Definitions.*—When the laymen attempts to decide a question over which the learned dispute, it is highly probable that his "solution" will have missed some of the very points at issue; and so I must run the risk of my discussion of these definitions being regarded as ill-informed. But—speaking at my peril—I should say this: If we are looking for a definition of "right" which will have some roughly intelligible meaning for the ordinary person, then the one given by Salmond seems to be fairly satisfactory. If, however, one is aiming at a nice accuracy of definition, Salmond's account is not wholly suitable, and Vinogradoff's and Gray's emphasis on "power" is no improvement. Indeed, this emphasis seems to mislead Gray entirely when he proceeds to discuss the relation[8] of "right" to "duty."

With respect to Vinogradoff—it is not true that "a limitation on one will is *power* for another." For, in the first place, the law does not, strictly speaking, "limit" one will. It lays it under interdict. It issues a prohibition. It demands that a limit should be preserved; but the demand, and the notification of penalty in the event of

[1] P. 237.
[2] *Commonsense in Law*, pp. 45–60.
[3] Pp. 46–7.
[4] *Commonsense in Law*, p. 62.
[5] *The Nature and Sources of Law*, p. 18.
[6] Vinogradoff and Gray are actually criticizing Ihering, but on this particular point Ihering's view seems to resemble that of Salmond.
[7] *Jurisprudence* (9th edit.), p. 77.
[8] See below, Sect. D, par. 49.

transgression, do not secure that the limit will be observed. In the second place, even if the law actually limited the operation of one will, this would not necessarily mean power for another will. What it does mean is a free field for exercise of power for that other, *if* he has power to exercise. The law, of course, adopts the common-sense principle that there is no point in giving a person a free field, and forbidding the intrusion of others, if that person has not (or is unlikely to acquire) power to occupy it. But the "granting of a right to . . ." (i.e. the leaving of a free field and the prohibition of interference) is something quite different from the "bestowal of power to. . . ." To create a public right of way, for example, does not give the public *power* to pass along it (except in the sense in which "power" is used as synonymous with "permission" or "authority"). The public may be blind or bedridden.

Nor do I think Gray very happy in the suggestion that "the right is not the interest, but the means by which enjoyment of the interest is secured." If "to give a right" means "to give the power or means to get or secure," then it would be a contradiction in terms to speak of a defeated or infringed, and still *existing*, right. If the "means given" did not "secure," then no "right" would have been given! If your power to secure were taken from you by an unauthorized person, then your right would not merely be infringed, but would also cease to exist. In fact, however, civil litigation proceeds on the assumption that A's right may be infringed and still exist as A's right.

39. *Rights: Class A.*—If we are to form a sound notion of the essence of right, we should begin with a consideration of concrete examples. Let us take, first, our old friend—a public right of way. This right involves for the public a "sphere of autonomy" respecting passage, plus a prohibition upon the erection of barriers. I say "prohibition," and wish this term to be understood with strictness. The prohibition is not a guarantee that barriers will not be erected. It is not a guarantee that they will be removed if raised.

Further, the scope of the prohibition is limited. (*a*) It is addressed to conative agents, and not to inanimate matter. (*b*) It is addressed to conative agents *other* than the owner of the right. *Your* resolve not to exercise your right, or *your* erection of barriers to its exercise, is not an infringement of the right. An infringement is something which can be the basis of an action before the courts. But if you do something to interfere with the exercise of your own right, no court would accept that as a basis of an action by you. You may refuse to exercise your right. You may renounce it. You cannot infringe it. It is a conceivable situation that you as one "legal person" (say as President of the Rights of Way Association) should sue yourself as another "legal person" (say as the proprietor of

Ashfield); but here there are two "persons" united in you, and it is for one of them that the right is claimed.

Now, paying attention only to the type of right discussed above, a fairly accurate—though somewhat clumsy—definition would be: A right is a sphere of autonomy assigned to a particular conative being or group, interference with which, on the part of other such beings, is prohibited by law.

There are many rights to which this definition is appropriate. E.g., there is the right to the use of the foreshore for various purposes,[1] and there are various rights connected with ownership of land.[2]

40. *Rights: Class B.*—If, however, we take other instances, the above definition does not appear to be adequate. E.g., if newspapers are laid out at a bookstall in a public place, any person has the right to demand one from the stall-keeper in return for the price.[3] Again, when a person's goods (excepting goods ranking as currency) have been stolen, he has a right to their surrender even from a person who has purchased them in good faith from the thief.[4] A child is entitled to support from his father, if the latter possesses the means.[5] A workman accidentally injured in the course of his employment is entitled to compensation from his employer.[6] A person who has sold a business along with the "goodwill" is prohibited from setting up as a competitor of the buyer—a prohibition which does not apply to other persons.

In all these cases the owner of the right is entitled to some positive delivery, service, aid, or forbearance from some particular person or group. While our first class of rights involved only a prohibition of interference (addressed to mankind in general), in this second class there is involved the demand (addressed to a specific person or persons) for some special form of assistance. A definition of right appropriate to this second class will require to cover the following points: (1) The owner of the right is not obliged to accept the relevant service, nor is he prohibited from accepting. He is free to accept. That is, he has a sphere of autonomy. (2) His effective pursuit of his interest involves the assistance of some other person or specified group of persons, and the rendering of this assistance is demanded by law. We may say, then—as regards this group—that: A right is a sphere of autonomy, acting within which the owner may command the co-operation of some other person (or group of persons).

41. *Real Rights and Personal Rights.*—We have now before us two classes of rights, with a provisional definition for each class, and

[1] Gloag and Henderson, p. 413.
[2] *Op. cit.*, p. 425.
[3] P. 35.
[4] Pr. 115–16.
[5] P. 531.
[6] Chap. xxii.

I believe that all legal rights fall into one or other of these two classes. But clearly we cannot rest content with this position. Two questions are bound to be raised: (1) Why do we use the common name "rights" for both classes? and (2) If we are justified in retaining the common name, must we not add a qualifying adjective to each class?

The second of these questions is the more easily disposed of. The difference between the two classes of rights has been recognized by lawyers. Rights in Class A correspond to "real rights" (correlative to duties), and those in Class B correspond to "personal rights" (correlative to obligations).[1] The only point which need be considered here is the question as to the principle upon which the two classes are distinguished from each other. When we consider our two classes we find two possible principles of division. The rights in class A are (*a*) rights against the world at large, and (*b*) rights involving non-interference. The rights in class B are (*a*) rights against specific individuals or groups, and (*b*) rights mainly involving positive assistance. As a general rule, it matters little whether we use characteristic (*a*) or (*b*) as the principle of classification, because most personal rights involve active assistance, and apparently all real rights involve only non-interference. But there are some personal rights involving only a kind of negative assistance (as when the "goodwill" of a business is sold), and therefore we must base our classification upon either (*a*) or (*b*). Lawyers have chosen (*a*) as the distinguishing principle, and this seems to me to be most reasonable. Indeed, even if characteristics (*a*) and (*b*) were *always* associated, I should still regard (*a*) as more fundamental, because every personal right depends (as no real right ever depends) upon some special pre-existing relationship or dealings between the owner of the right and the ower of the obligation.

42. *Rights and Interests.*—The other question[2] which confronted us was, "Why do we use the common name "rights" for both real and personal rights when they have such different characteristics?" The answer is this: when we reflect upon these two kinds of right, we find that they have this fundamental point in common: they are both "spheres of autonomy" protected by law. And a "sphere of autonomy," it will be remembered, relates to the pursuit of an interest. We may, therefore, conclude that the reason why we call both of them "rights" is that we think of a right as, in Salmond's rough description, "an interest recognized and protected by a rule of law."

43. *Definition of Right.*—Let us now seek a formula to embrace both kinds of right. In our definition must be included some term which is neutral as between the notion of "prohibition of inter-

[1] See above, par. 32.

[2] See above, par. 41.

ference" and the notion of "ordering positive assistance." I offer the following:

A right = A sphere of autonomy to which are annexed legal demands upon the behaviour of other conative beings.

44. *Summary of Results.*—It may be useful to gather up now the results of all that has been said so far in this section, revising, as we do so, our earlier provisional definitions of real and personal rights.

An interest = An object of conation.
A sphere of autonomy = The pursuit-of-an-interest's being neither commanded nor prohibited by law.
A right = A sphere of autonomy to which are annexed legal demands upon the behaviour of other conative beings.
A real right = A sphere of autonomy to which are annexed legal demands upon the world at large.
A personal right = A sphere of autonomy to which are annexed legal demands addressed to a specific person or persons.

SECTION D. DUTIES AND OBLIGATIONS, AND THEIR RELATION TO RIGHTS

45. *Provisional Definitions.*—We turn now to the consideration of duties and obligations.[1] How are these to be defined, and how are they related to rights? One answer comes readily to hand. The essence of a legal wrong, Salmond holds,[2] is its recognition as wrong by law. It is a violation of justice according to law. A duty is an act the opposite of which is a wrong. Duties and wrongs are correlative. A right is an interest respect for which is a duty and the disregard of which is a wrong. Every duty involves some interest to which it relates and for whose protection it exists.

From this summary of the leading ideas in Salmond's account of the nature of duty, it will be obvious that he regards rights and duties as correlative. The same theory seems to be accepted[3] by Gloag and Henderson when they define Duties in relation to Real Rights and Obligations in relation to Personal Rights.

That this theory is correct, in respect of the overwhelming majority of duties and obligations, is clear in view of the following facts: The infringement of a legal duty is a ground for the institution of proceedings against the transgressor in the courts of the realm. Now proceedings before a court are concerned either with civil actions or with criminal charges. That is to say, what is sought is either reparation for an alleged breach of right, or punishment for an alleged breach of duty. In civil procedure, the aim is to enforce

[1] To avoid unnecessary refinements I shall use the term "duty" to cover both duties and obligations unless the distinction between them is important for the sense of the argument.

[2] Pp. 236 ff.

[3] See above, par. 32.

a right or to secure compensation for its violation, and not to inflict a penalty.[1] In criminal procedure, the aim is to inflict a penalty and not to repair the injury done. Hence it follows that *all* civil wrongs must be violations of duties which have their correlative rights. I do not see how this conclusion can be avoided. If a civil action is for the purpose of securing the declaration and enforcement of (or compensation for) a right which has been violated,[2] then the wrong perpetrated must have been the infraction of a duty correlative to that right. It is true that the relation of criminal wrongs to rights cannot be so rigorously deduced, because the aim of criminal procedure is defined, not in relation to reparation for rights infringed, but only in relation to punishment for duties infringed. Nevertheless, the vast majority of criminal wrongs are, in fact, acts which infringe or endanger rights. Anyone who doubts this statement may satisfy himself by consulting the literature upon the subject.[3]

One further point of importance is that duties appear to be related to rights as consequent to ground. Your duty to me can often be extinguished by my making it clear that I do not wish to exercise my right. But my right against you can never be extinguished by your making it clear that you do not wish to perform your duty.

In view of the above-noted facts, there is a strong case for the doctrine that rights and duties are correlative, duties following from rights. Hence we may adopt the following provisional definitions:

> A Duty = What is demanded in a Real Right; and
> An Obligation = What is particularly demanded in a Personal Right.

These definitions are, of course, only provisional, since we may come across exceptional duties which the definitions do not cover. Whether there are any real—and not merely apparent—exceptions is the main question with which we shall be occupied in the rest of this section; and before dealing with this question I shall make only one observation which, I think, will be generally accepted as eminently reasonable. It is this:

The evidence for the theory that duties are correlative to and consequent upon rights is so ample and forceful that only the most

[1] With regard to certain anomalous cases, such as English "penal actions," which do not, I think, affect the substance of my argument, see Kenny, *Outlines of Criminal Law*, 14th edit., pp. 7 ff., and his *Cases Illustrative of English Criminal Law*, 8th edit., pp. 4–12.

[2] This is technically true even of "penal actions" which assert a personal right against the defendant, the plaintiff asserting that, in virtue of certain acts performed by both of them, the defendant has incurred a "quasi-contractual" obligation (see Kenny, *Cases*, p. 6). But, technicalities aside, a "penal action" is in reality a criminal prosecution for the encouragement of which the state offers financial inducements.

[3] E.g. Kenny, *op. cit.*, and Gloag and Henderson, chap. xlviii.

conclusive proof that there are duties independent of rights can justify doubts as to the validity of this theory.

46. *Objections to be Considered.*—Are there, then, any serious objections? I cannot deal with, or even anticipate, all possible criticisms; but I shall consider the ones which I take to be of greatest importance. Of these there are four: (*a*) The criticism that duties to the public have no correlative rights; (*b*) The criticism that duties regarding animals have no correlative rights; (*c*) The criticism that our theory of rights and duties will not square with the possession of rights and duties by "artificial persons"; (*d*) The objection that there are certain peculiar criminal wrongs which it is our duty not to commit, although they have no obvious relation to any right or interest whatsoever.

47. (*a*) *Duties to the Public.*—Perhaps our best introduction to this topic will be to begin with an argument advanced by Gray in support of his contention that there are duties without rights. "There may be a duty to do an act to a person where we cannot say that he has a right to have the act done. Thus it may be the duty of Jack Ketch to hang Jonathan Wild, but we do not say that Wild has a right to be hanged."[1] I am not certain whether Gray means us to infer that here is a duty without *any* correlative right; but if he does mean this, I am unable to follow him. What he says is perfectly true. We do not say that Wild has a right to be hanged. But, surely, while the duty of Jack Ketch is a duty *regarding* or *relating to* Wild, the correlative right (if there be one) need not be a right *of* Wild. Is Gray's argument any more significant than the following one?—"It may be an obligation on the buyer of stolen goods to return them to the true owner; but we do not say that the goods have a right to be returned." No. We use our common sense and say that the true owner has the right to their return. In like manner, may it not be the case that someone has a right that Jonathan Wild should be hanged by Ketch? The fact is that Ketch is a public servant employed to do a certain kind of work. Is it not reasonable to say that Ketch's obligation is correlative to the public's right that he should do the work for which he is employed?

It may be replied that "the public" cannot be the owner of rights —that a right must always be vested in some determinate individual. Now it is true that rights are always vested in determinate persons, but there are certain rights which an individual possesses in virtue of his membership of a group and which he would not possess were he not a member. Some rights and duties, indeed, are owned or owed by him only when he is professedly acting as a member. It is to these that the terms "public right" and "group right" are applied, and I fail to see any reasonable ground of objection to such terms.

[1] *Nature and Sources of the Law*, p. 9.

Further, the law books speak explicitly of public rights—rights of way, rights of navigation and fishing, rights of protection against nuisances. Of course it is possible to argue that the law books are mistaken in speaking of these as "rights," and that they ought to be given some other name. But I am not aware that any strong reasons have been offered in support of this argument. The definition of right advanced in an earlier part[1] of this paper will cover "rights" owned by persons in their corporate capacity—groups such as the population of a city, joint stock companies, and the public of a country—and the legal system explicitly accords rights to such groups. Further, distinguished jurists such as Salmond[2] see nothing strange in the notion of "public right." Surely, then, the onus of proof rests upon those who deny the validity of this notion.

48. (*b*) *Duties to Animals.*—This subject is more difficult and will require more lengthy treatment. My excuse for devoting so much attention to what may appear to be a relatively unimportant matter is that it is not really unimportant; for it raises crucial issues.

The first point to be noted is that there is a difference between having duties *to* animals, and having duties *regarding* animals. That I should muzzle my ferocious dog is a duty regarding the dog, but it is a duty to my neighbours. Now it is just a plain inescapable fact that there are duties regarding animals. Not everyone admits, however, that there are duties to animals. There is a view[3] that all duties regarding animals are duties to human beings or to society. It has been said, that the law prohibiting cruelty to animals is laid down in the interest of men. To permit cruelty to animals would probably result in the formation of cruel habits which would be exercised against one's fellow-men; and, *therefore*, cruelty to animals is forbidden.

This view need not detain us. It is an interpretation of the intention of the law; and if it be a true interpretation, then it lends no support to the contention that there are duties apart from rights. All duties regarding animals are correlative to rights owned by human beings.

Many people, however, reject the above interpretation as far-fetched and artificial. "The true reason of the statutes is to preserve the dumb creatures from suffering."[4] Gray holds that we really have duties *to* animals. Ross[5] adopts a similar view. I am myself inclined to accept the Gray-Ross theory. It interprets my own sentiments, and seems best to accord with the attitude of public officers who are concerned in the prosecutions and trials for breach of the law.

49. *View that Animals have no Rights.*—But to accept the position that we have duties *to* animals does raise the problem of the relation

[1] Sect. C, par. 44. [2] P. 240. [3] Held, e.g., by Salmond, pp. 330 f.
[4] Gray, p. 43. [5] *The Right and the Good*, p. 49.

of rights to duties. Gray and Ross combine this recognition of duties to animals with a denial that animals possess rights. Ross's denial of rights is admittedly hesitant. Animals have no duties, he thinks, since they are not moral agents; and he thinks it reasonable to say that they have no rights for the same reason. What, in his view, seems to be important about a moral agent, in this context, is the capacity to *claim* a right. "Since we mean by a right something that can be justly claimed, we should probably say that animals have not rights, not because the claim to humane treatment would not be just if it were made, but because they cannot make it."[1] Though Ross regards *ability to claim* a right as essential to the *possession* of it, he suggests no reason why this should be necessary.

Gray's argument is somewhat fuller. "Interests of brute animals may have legal protection. . . . Yet beasts have no legal rights because it is not on their motion that this protection is called forth."[2] What is meant by "on their motion" will be more clear, perhaps, from the following: "To accomplish its purposes (in the protection and advancement of human interests) the chief means employed by an organized society is to compel individuals to do or to forbear from doing particular things. Sometimes the society puts this compulsion in force of its own motion; and sometimes it puts it in force only on the motion of the individuals who are interested in having it exercised.

"The rights correlative to those duties which the society will enforce on its own motion are the legal rights of that society. The rights correlative to those duties which the society will enforce on the motion of an individual are the individual's legal rights. The acts and forbearances which an organized society will enforce are the legal duties of the persons whose acts and forbearances are enforced."[3] The inference is clear. Since no rights are enforced "on the motion" of animals, animals have no rights.

50. *Criticism of this View.*—Now the question to which we must seek an answer is, obviously, this: Is it true that the "owning of a right" and the "moving for its enforcement" must be united in the one person? The "moving" must refer, I suppose, to the formal setting in motion of the legal machinery. An animal, by barking, biting, or running away when it receives or is threatened with cruelty, is certainly "moving" against the breach of duty. I suppose that what Gray has in mind is its inability to plead in a court of justice.

But if "moving" means the formal setting in motion of legal machinery, then surely it is simply not true that the rights of the individual are exactly co-extensive with those which are enforced on his own motion; and the like observation applies to public rights.

[1] Ross, p. 50. [2] Gray, p. 20. [3] *Ibid.*, p. 12.

It is quite true that many of my rights will not be enforced unless I take the necessary steps; and it is true that in many cases a private individual cannot move to enforce some forms of public right. But there are many important exceptions. A private individual or the officers of a voluntary association can move to vindicate a public right of way. Again, while the rights of possession and use of his property are rights of the individual, the police will frequently move for the enforcement of these rights without prior consultation with the owner. I am referring, not merely to the punishment[1] of theft once it has occurred, but also to the fact that the police can legally interfere to prevent the infringement of private right. Again, under rules of law which have now been amended, a wife's title to sue in the courts had little relation to the number of rights she might possess;[2] and Gray himself recognizes that idiots and babies possess rights without any capacity to enforce those rights "on their own motion." This capacity is fictitiously "attributed" to them, he says, by giving their guardians power to move.[3]

All these important examples, in which the possession of rights and the ability to move for their enforcement do not coincide, make it clear that the two things—possession of right and ability to move—have no necessary connection. Yet it is on the supposed necessity of this connection that Gray bases the denial of rights to animals. If his theory of right demands the "attribution" of the guardian's will to a child, where is the difficulty in "attributing" to animals the will of an officer of the crown or an official of the Society for the Prevention of Cruelty to Animals?[4]

Actually this fictitious "attribution" of will is called for only if we incorporate into the notion of right an element which has nothing to do with a right as such. Gray and Ross[5] are misled when they suppose that you cannot have a right apart from the "power" to

[1] But even in the case of criminal procedure, Gray's theory breaks down. "For centuries after the Norman Conquest there were in England three modes of accusation and three modes of trial. There was the appeal or accusation by a private person, indictment or accusation by a grand jury, and information in the nature of a declaration in the King's suit, filed either by the Attorney-General or the Master of the Crown Office." (Webb, *Two Centuries' Growth of American Law*, pp. 345–6.) That is, a particular wrong might be proceeded against, either on the motion of a private individual or on the motion of a public official.

[2] Gloag and Henderson, p. 521.

[3] Gray, pp. 29 ff.

[4] Gray (p. 43) actually recognizes the possibility of "attributing" someone else's will to an animal. Surely this should have prevented his adoption of the conception of right which he expounds on pages 12 and 20.

[5] Ross's position (p. 52) is, certainly, that a *moral* right must not be identified with a "power"; and he only says that a *legal* right *may* be identified with a "power." But if he does not define "right" in terms of "power," what exactly does he mean by "*capacity to claim*"?

"claim" or "move for" its enforcement. In dealing with the notion of right in an earlier part[1] of this paper, I said that Gray's definition of right in terms of a "power" rather than in terms of a "sphere of autonomy" tended to confuse his discussion of the relation of right to duty. That observation is amply borne out by the results of our present discussion. I contend that when they deny the possession of rights to animals, Gray and Ross are confusing two entirely different things: (1) the possession of a right; and (2) the ability to initiate proceedings for the defence of a right. I do not see how this confusion can be avoided if one makes the initial mistake of considering a "power" instead of a "sphere of autonomy" as the nucleus[2] of a right.

51. *Animals have legal Rights.*—On my view of what a right is, animals possess legal rights. They can have "objects of conation" or "interests," such as the securing of food, the well-being of their young, the accompanying their masters for walks, and so on. The pursuit of these interests can be free from prohibition; i.e. animals can have "spheres of autonomy." To some of their "spheres of autonomy" there are, in fact, annexed legal demands upon the behaviour of other conative beings, i.e. animals have rights.

52. *Rights in fact, if not in name.*—It may be objected, however, that the real question is not whether the attribution of rights to animals squares with my theory. The real question is whether it squares with the facts. If, as I claim, my theory of right has been arrived at by reflection upon those particular rights which are embodied in a working system of law, and if I assert that animals have (not *should* have) rights, is it not a valid challenge to request that I should point to those rights? This, I agree, is a challenge to which I have laid myself open, and I reply that the rights are clearly there. They are all those which are embraced in the general right to be treated without cruelty. There may be others as well.

"But (it may be said) lawyers do not agree that what you call rights are really rights. You cannot point to any explicit recognition of animal rights." That may be true. I am willing to assume that Gray is correct in saying that no modern civilized system attributes to animals either rights or duties. But it will be admitted by any candid reflective person that, for one reason or another, we often use terminology which tends to obscure the true facts. We may call substantially different things by the same name, and substantially the same things by different names. Probably, with regard

[1] See above, sect. C, par. 38.

[2] For Gray, the "power" is perhaps what the law gives in the creation of a right, rather than the "nucleus" of a right. But I find his whole discussion of "right" rather difficult to understand; and I am inclined to suspect that this is at least partly due to confusion of thought on his part.

to rights, many lawyers are guilty of the second of these two forms of obscurantism. But when we look frankly at the provisions of the law, we shall see that, amongst all the interests it tries to protect, some are interests of men and others are interests of animals. This protection, when it is possessed by men, we call "having a right or rights." We are reluctant to use the same language when the protection belongs to animals. But here, surely, it is our terminology which is at fault. When we look at those things which men possess and which are called rights; when we penetrate to their essence; and when we attend to certain things possessed by animals; then we see that those animal possessions are substantially the same as what we call rights when they belong to human beings. Animals, that is to say, possess legal rights in fact if not in name; and the refusal to call a spade a spade, when it is owned by John Smith instead of by James Brown, does not help either legal theory or legal practice.

Now in what I have just said, I was working on the assumption that lawyers do not, in fact, attribute rights to animals. But this assumption, if meant to refer to all jurists, is overbold. Professional opinion is not by any means unanimous on the subject, and seems at the moment to be in a transitional stage. Kenny[1] places cruelty to animals amongst crimes against *property*, but the latest case referred to by him shows that the classification is utterly out of date. Gloag and Henderson refer[2] briefly to this crime in a paragraph on cruelty in general under the heading of offences against the *person*.

53. *Animals have not (but could have) Legal Duties.*—I need deal only briefly with the question whether animals owe duties. So far as I am aware, they have no legal duties, for I do not know of any demands issued directly *to* them. Demands *respecting* them are made upon human beings; and this imputation of liability to human beings is, no doubt, the most efficient way of controlling their behaviour. It is a favourite expedient, even in the affairs of men, to charge one person with responsibility for the conduct of others. The practice is frequently resorted to during military occupation of enemy territory.

It should be remembered, however, that we are here speaking of legal duties. Extra-legal demands (orders from their masters, etc.) are made upon animals, and these may possibly be extra-legal duties. Further, I see nothing ridiculous in the idea of animals having genuinely legal duties. The notion appears ridiculous only because we tend to think of legal demands in terms of printed orders, formal proclamations, and the ritual of law courts. Actually, quite different

[1] *Outlines of Criminal Law* (14th edit.), pp. 171–2.

[2] Gloag and Henderson, p. 583.

media may be employed for the communication of legal demands. Mr. Hore-Belisha's black and white pole, topped by an orange ball, speaks imperatively to the motorist; and it is probably only on grounds of general expediency that we have not exercised our ingenuity in creating some such symbolism for issuing legal demands to the higher animals. Few, I imagine, would question the wisdom of our present procedure of throwing the legal liability respecting animals upon the human beings who keep them, and permitting men to exercise, within limits, despotic control. To a lesser degree we adopt the same policy with respect to very young children. It may be said, then, that animals possess a privilege commonly attributed only to the "sovereign" of absolutist political theory, namely, that while they possess legal rights, they owe no legal duties or obligations.

54. (*c*) *Artificial Persons.*–The third criticism[1] of which we have to take account relates to the conception of "artificial persons." It is a curious fact that, while some writers on legal theory find difficulty in admitting that animals are or can be subjects of rights and duties, they appear to find no difficulty in conceiving "artificial persons," such as a mass of property, to be the subjects of rights and duties. "An artificial person may exist without being supported by any natural person. It may consist merely of a mass of property, of rights and of duties, to which the law chooses to give a fictitious unity by treating it as a "universitas bonorum." The most familiar example is an "hereditas" before it has been accepted by the heir, which in Roman law is treated as capable of increase and diminution, and even of contracting by means of a slave comprised in it, as if it were a person."[2]

The existence of "artificial persons" of this kind points to a possible criticism of the theory of rights and duties put forward in this paper. It will be recalled that in the last seven paragraphs we have been answering objections to our hypothesis that duties and obligations are all correlative to rights. But the possible criticism which I have now in mind is of a different nature. It is this: on our theory the owner of a right or the ower of a duty must be capable of having "interests," i.e. he must be a conative being. A mass of property—say the estate of a bankrupt—is not a conative being or collection of conative beings (unless it happens to be a menagerie). But this mass of property owns rights and owes obligations. Therefore the subject of rights and duties is not necessarily a conative being.

In reply, two points may be made. (1) While it is true that the kind of "artificial person" referred to is discussed in books on legal theory, little (if any) use seems to be made of this notion in modern

[1] See above, par. 46. [2] Holland, p. 330.

English text-books expounding the law. I have not come across any reference to it either in Gloag and Henderson or in Jenks's *Book of English Law*. Apparently it occupied a place of some importance in the Roman system, and is used in Germany at the present day; but any suggestion of it in the systems of the English-speaking world seem to be merely curious survivals.[1] Holland[2] mentions, as an example, the estate of a bankrupt; but the Scots bankruptcy law is expounded entirely without reference to the notion of the estate as itself a "person."[3]

(2) Even if this notion of an "artificial person" were extensively used in modern systems, there would still be the question whether it is anything more than an expedient for economy of speech. As such, its use would be intelligible. As a banker might say, "A's No. 1 account owes the bank £20," when he really means "A, confining our attention merely to the transactions recorded in No. 1 account, owes the proprietors of the bank £20"; so we may speak of an "estate" as owing debts and being entitled to payments. The rights and duties referred to really vest in and fall upon conative agents. Before the conception of "artificial person" could have any real importance for the theory of rights and duties, it would have to be shown that the "rights" and "duties" of artificial persons have no essential relation to the interests of conative beings.

55. (*d*) *Crimes alleged to have no Correlative Rights.* (i) *Crimes relating to Property.*—The fourth[4] objection to be considered is that there are certain peculiar criminal wrongs which have no obvious relation to any right or interest whatsoever. Now, of these supposed exceptions to our general rule, there is only one which I find to be really perplexing, and I shall reserve consideration of it to the end.

Let us begin with a group referred to by Kenny. " . . . One remarkable difference between criminal and civil (i.e. non-criminal) law lies, as we shall subsequently see, in the fact that, while breaches of the latter always involve an infringement of some person's right, the criminal law makes it our duty to abstain from various objectionable acts although no particular person's rights would be invaded by our doing them. Instances of crimes which do not violate anyone's right may be found in the offences of engraving upon any metal plate (even when it is your own) the words of a banknote, without lawful excuse for so doing; or of being found in possession of housebreaking tools by night; or of keeping a live Colorado beetle."[5] Now, confining ourselves for the moment to the first example—engraving upon a metal plate—it is, I think, quite true that, in the violation of this duty, no particular person's right (meaning a particular person's private right) is violated. But I do not suppose that

[1] See Gray, pp. 46 ff. [2] P. 92. [3] Gloag and Henderson, chap. xlvii.
[4] See par. 46. [5] *Outlines of Criminal Law*, pp. 4 f.

Kenny would hold that the duty is not correlative to and consequent upon any right. Such a position would be quite untenable. When a "sphere of autonomy" is erected into a right, the demand or demands involved often go no further than providing against actual violation of the sphere of autonomy. Frequently, however, they provide also against conduct which merely threatens or conduces to such violation. The example under consideration is a case in point. It is, I suppose, clear to everyone that the condemnation of this act is related to the condemnation of passing forged notes. Control of currency issue by some authority is felt to be a necessary part of the machinery of commercial life; and a forged note, when discovered to be such, is devoid of exchange value. Any member of the public parting with goods at a stated price has a personal right against the buyer for that amount in legal tender. And while this right is not actually infringed by the mere act of engraving on a metal plate, the right is endangered by such an act, for it is very likely that the act is preparatory to the passing of forged money. This danger is greatly counteracted, and no serious hardship is inflicted on anyone, by the prohibition of the act. Hence, the duty of refraining is correlative to the right of anyone engaging in commercial transactions. Strictly speaking, the position is more complicated than the last sentence suggests. The personal right of a seller to receive good money is correlative to the obligation of a buyer to supply it. A seller has also a real right subsidiary to the personal one, namely, that the violation of his personal right should not be encouraged or assisted, and this is a right against the world at large.[1] It is to this right that the duty of not engraving the words of a banknote upon a metal plate is immediately related. There is, however, no good reason for supposing that there must always be this one-one correspondence between rights and duties. A may have a main right with which are associated subsidiary rights, the whole being correlative to one comprehensive duty owed by B. Or A may have a right which involves a main and a number of subsidiary duties for B. But to discover an absence of one-one correspondence, is not at all incompatible with the existence of complete correlativity.

The principal arguments and conclusions which have been advanced in the foregoing discussion can readily be applied to Kenny's other examples.

56. (ii) *Suicide.*—With regard to the crimes just discussed, there was, I think, no doubt about their having *some* relation to obvious material interests, the only difficulty being that we had to show their relation to definite rights of a public or private character. The

[1] Since this is not only a right against the world at large, but is also a right owned by the members of the public as such, it should (I think) be classified as a public right.

problem is rather different, however, when we turn to the crime of suicide. In this case it is, at first sight, hard to see any relation to either right or interest. It is true that to take one's own life usually involves that many obligations are left undischarged—payments due to creditors, support due to dependants, etc. But I do not think that considerations of this kind have been mainly responsible for the condemnation of suicide. When one considers the history of the attitude to suicide, however, it becomes clear that a reference to an interest, or rather to a presumed interest, is involved. The condemnation appears to be grounded mainly on the belief that the suicide, in disposing of his own life, is assuming proprietorial rights over his body which really belong to God; his life being something held by him in trust for the fulfilment of functions which he is sent into the world to perform. This explanation is supported by the fact that the attitude to suicide varies in different ages in accordance with types of philosophical and religious belief. In the pre-Christian era amongst various European peoples, suicide was so far from being condemned as a crime that it was regarded as being an honourable departure from life for, say, a defeated general. As Christianity spread and developed, disapproval became more and more marked. To-day the attitude is one of pity rather than of horrified condemnation, unless the circumstances indicate exceptional cowardice. Suicide is still a crime according to English law, although the law here seems to be at variance with a large section of public opinion.[1] In Scotland it is not a crime, although it was so in the seventeenth century; and it is interesting to note the sort of reason then given for so classifying it. "God Almighty has placed every man at his post here, and he who violently tears himself from it, deserves much worse, and is more guilty than a soldier who deserts his station; and since princes punish as criminals, such as kill their subjects; much more may the Almighty punish him who kills himself; for he who kills himself, kills God's subject; and therefore, *Nemo est dominus suorum membrorum.* The law likewise considers him who would kill himself, as one who would spare none else, and condemns an humour which is so dangerous.

"Upon these reasons, but especially because God hath forbid man to kill, without making a distinction of killing ourselves, or others; all Christian nations punish severely self-murder, as murder."[2]

The primary conception here is that of God as having proprietary rights in the persons of His creatures; and the presumed interest which forms the nucleus of the right is given legal protection—

[1] See Kenny, *Outlines of Criminal Law*, pp. 113 ff.; and his *Cases Illustrative of English Criminal Law*, pp. 89 f.

[2] Sir George Mackenzie, *Laws and Customs of Scotland in Matters Criminal*, 2nd edit., p. 75.

partly because even Divine rights are committed in some degree to the keeping of men; and partly also, no doubt, because of the fear that the Divine wrath will be visited upon a society which countenances their infringement.

57. *Apparently "rightless" Duties may be Historically Explained.*— This discussion of suicide, and the explanation of its being, at times, regarded as a crime, brings out certain points to which special attention should be given. It is evident that the existence of a legal duty may sometimes have to be explained by reference to the beliefs of past ages. Interests or presumed interests of man or God have been surrounded by legal protection,[1] thus giving rise to duties or obligations; and, once they have been constituted, such duties may continue to be enforced long after the interest or presumed interest which they were designed to protect has vanished or been forgotten. The duty remains as the husk within which the kernel has withered away. Such antiquated duties are very unlikely to persist when their infraction subjects the delinquent merely to "civil" and not also to "criminal" prosecution. When an interest has withered away or ceased to be believed in, it is most unlikely that anyone will take the trouble to demand performance of the duties which were designed to protect it. Nothing is to be gained either by way of damages or specific performance. But where, as in criminal prosecution, the immediate aim is not to *redress* a wrong but only to *punish* the wrong-doing, and where the prosecutor is not obliged to show that the act has actually succeeded in infringing a right, but only that it is the kind of act which has actually been prohibited by the law— in such circumstances criminal prosecution and punishment may persist for a time even after the whole *raison d'être* of the punishment has vanished. It is also clear, however, that once men begin to doubt the existence of any important interest which is protected by imposing the duty in question, the tendency is for the breach of this duty to be punished with diminishing severity, and for the act to be deleted finally from the category of crimes. Sometimes this same process of development results in the *name* of the offence being retained and applied to an act which is very different in character from the act to which the name was earlier attached. A very good example of this is found in the crime of "blasphemy." In the early part of the eighteenth century blasphemy meant the

[1] See Gray, *Nature and Sources of the Law*, pp. 39 ff., on the legal personality of supernatural beings. It appears that when once God is given legal rights there is a natural tendency to ascribe to Him also legal obligations. Thus while, on the one hand, it may be declared that "our dear lady Mary the mother of Jesus Christ and the Knight Saint George be the feudal lords of this parish"; on the other hand it may be laid down that "The Holy Ghost is bound to pay 40 shillings for the two fields which it has had in the side farm" (p. 42, notes 1 and 2).

denial (by writing, printing, preaching, or teaching) of the doctrine of the Trinity, or of the truth of the Christian religion, or of the divine authority of Scripture; and this crime was severely punished.[1] In 1696 a young man, Thomas Aitkenhead, was executed for the offence.[2] Nowadays, the position is very different. Blasphemy is penalized as causing or tending to cause a breach of the peace; and it involves the use of scurrilous or abusive language such as will disgust an ordinary jury. A "temperate and scholarly attack on the Deity"—to quote the delightful phrase of Gloag and Henderson—is not blasphemous.[3]

58. (iii) *Incest.*—Of all the legal duties of which I am aware, the only one which I find really difficult to explain in accordance with the theory that duties are correlative to and consequent upon rights is that duty the breach of which is punished as "incest"—the duty, binding upon persons within certain degrees of relationship, to refrain from marrying or having sexual intimacy with each other. The immediate source of this duty in British law is, of course, clear. It is a modified form of the rule of Leviticus xviii transmitted through Christianity. But this is certainly not the ultimate source. As to what constitutes incest, rules have varied extensively[4] from place to place and time to time; but, apart from very exceptional circumstances, wherever social organization exists at all, there is at least the prohibition of marriage between children of the same parent, and between a person and the child of his or her grandfather or grandmother, great-grandfather or great-grandmother, etc. At any rate, I believe this to be the general rule in primitive and ancient, as in modern societies. Why this prohibition should be so emphatic and widespread, and how it can be said to protect any individual or social interest, I confess that I am not confident. There is great difficulty in showing that this is not a case of an act which is now, and always has been, felt to be wrong simply in itself and without regard to any possible consequences.

Explanations have, of course, been offered—ranging from the simple savage's assertion that incest calls down the wrath of supernatural beings or blights the growing crops, to the modern suggestion that close inbreeding has been found detrimental to the race. I am not sure whether biologists are agreed as to the truth of this latter view; but in any case it may be doubted whether primitive peoples, with their tendency to attribute good and ill fortune to supernatural causes, would be likely to work out this theory. They

[1] Everyman *Encyclopædia*, article "Blasphemy."

[2] Robertson, *The Government, Constitution, and Laws of Scotland*, p. 215.

[3] Gloag and Henderson, p. 577.

[4] See, e.g., Westermarck, *Origin and Development of Moral Ideas*, vol. ii, chap. xl; and Bryce, *Studies in History and Jurisprudence*, vol. ii, essay xvi.

may have done so. They were not quite so blind to the inter-relation of natural events as some writers would have us suppose. But when we think of some of the extraordinary practices of primitive medicine we must, in the absence of good evidence, hesitate to assume that the widespread aversion to incest is founded upon biological theory.

Of the various explanations, the one which seems to me most reasonable is that which traces the condemnation of incest to two mutually supporting interests—the first social and the second individual. As to the first, it is well known that, amongst primitive peoples, economic and social life was carried on, as a general rule, through the medium of a class-structure. The unity of the whole society and the nurture of each individual member were dependent upon the proper functioning of this class system, one of the rules of which was that a wife or husband must be selected from a certain class—a man invariably (I think) taking a wife from a class other than his own. Breach of this rule was severely punished; and around this system there would naturally grow up strong feelings as to its sanctity, and apprehensions as to the dire consequences should its rules be broken. Secondly, it is likely that the social sanctions and supernatural apprehensions would be strengthened by a natural reticence on the part of very close kin as to sexual intimacy with each other. I say "reticence" rather than "sense of wrong-doing" because there is, I think, an attitude of reserve and withdrawal, on certain matters, amongst persons brought up in the same household, or where one stands *in loco parentis* to the other. We may, for instance, lay bare our inmost thoughts to the friends of our choice, or even to accidental acquaintances, when we shrink from doing so to our parents, brothers, or sisters. Again, I think that most people would view with the same kind of censure a case of sexual irregularity between teacher and pupil, as they would feel with regard to such irregularity between parent and child, although the censure would be stronger in the latter case than in the former. It is, indeed, highly probable that the repugnance to incest is derived partly at least from an attitude of mind which has various other expressions—an attitude of mind inspired by some vague idea of guarding our individuality and withdrawing ourselves from those who, because of their authority or constant contact with us, naturally exercise a certain control over us. Attributing the same desire for privacy to others, we react against the idea of its infringement. If I am correct in supposing the widespread existence of this psychological state, one can easily understand how it would support and be supported by the socially useful prohibitions of primitive society. One can also understand how it would act as an incentive to preserve these prohibitions, in some modified form, in more highly developed

civilizations where greater stress is laid by law and sentiment upon the sanctity of the individual personality.

But while this explanation seems to me to have a good deal in its favour, I shall not here make any claim that it gives definite support to the general argument of this paper. I am prepared to say that here we have a case which cannot with certainty be ranged under our theory of the relation of interests, rights, and duties to each other. On the other hand, I most emphatically reject the suggestion that it constitutes a proved exception, calling for a modification of the theory. It is simply a case which cannot be said either to contradict or to confirm the theory until we know more about it.

59. *General Conclusions.*—I shall now summarize the main conclusions of this paper, stating them in the reverse order to that in which they were reached. They are:

Firstly, that duties are correlative to and consequent upon rights. This is obviously true of the vast majority of rights and duties, and the apparent exceptions can practically all be brought under the general rule when they are more carefully considered. The one difficult case which has been discussed in the last paragraph is of a very doubtful nature, and I think that it is probably not a real exception. There can, therefore, be scant justification for rejecting the view that duties are correlative to and consequent upon rights.

Secondly, that rights must be defined in relation to interests. To have scope to pursue one's real or presumed interest protected by law—that is what a "right" means. Hence, since duties draw their significance from rights, and rights from actual or presumed interests, then duties must draw their significance ultimately from interests; and if we try to conceive of duty apart from this its fundamental ground, the concept of duty becomes utterly unintelligible.

Thirdly, that the above conclusions have importance for moral as well as for legal theory. While this paper has been concerned with the relation of interest to legal right and duty, our conclusions have more than a legal bearing. They have, almost certainly, brought to light fundamental principles of moral right and duty, since (as was shown in our first section) the principles of morals exert such a profound influence upon the general principles of legislation.

(*Concluded*)

FREEDOM AND PERSONALITY AGAIN

Professor A. E. TAYLOR

In an essay entitled "Freedom and Personality" (Philosophy, XIV, 55, July 1939) I have contended that "intelligence (or rationality) is a principle of indetermination within us." As I find that my argument, though to myself it appears incontrovertible, has not produced conviction in some quarters where I had hoped it might be effective, I can only suppose that, presumably by my own fault, it was not stated as clearly as it should have been. This must be my excuse for returning to the subject; in doing so I shall try to be, to the best of my power, at once brief and lucid.

The guiding thought underlying the reasoning of my essay was one which I first learned long ago from F. H. Bradley, viz. that before I assert a proposition as true, I ought to be satisfied that the truth of the proposition is compatible with my knowledge that it is true. That this principle is sound seems obvious. For it could only be false if there is some proposition p such that p itself "entails" that p is known not to be true—but in that case p would also entail that "p is not true," and would therefore be a false proposition. Of course I do not mean that a proposition may not often be true though we are without the means for proving its truth. It may be true that a man has committed a certain crime and has also destroyed all the evidence which would be necessary to establish his guilt (though if he has really destroyed it *all*, I obviously am not in a position to *know* his guilt). Many transactions take place in human history of which no sufficient evidence survives (though a cautious historian would be careful to distinguish his own divinations about such unrecorded actions from that which he claims to *know* of the past). An astronomer might have his private fancies about the state of the invisible half of the moon's surface (though, except in so far as he believed he could make them at least probable by reasoning from what we can actually observe, I conceive he would call them no more than fancies). And it would not be a sufficient argument for the soul's survival of death to say that if there is no survival, we shall to the end of time be unable to know that we do not survive. (Though here, again, I should say that no man is entitled to claim that he *knows* there is no survival unless he is prepared to give sufficient grounds for his denial based on facts which are accessible to his knowledge. If he cannot do this, he will need to qualify his denial, like Alexander, by offering the reader an alternative: "*either*

death is a final end of us, *or* there is something wrong with the premisses of my philosophy.")

Now let us apply the principle just laid down to the thesis under examination, the distinctive doctrine of the "scientific" determinist. That doctrine, we must remember, is that every voluntary act of an intelligent person, *being an event in time*, is subject to a law which is universally valid for all events without exception. The law is that every such event, or at least every event except the first event of all, if there ever was such a first event—is a *one-valued* function of earlier events, and of nothing but earlier events; given adequate knowledge of the relevant antecedent events, it may always be said in the Leibnitzian formula, *datum est etiam quaesitum*, the subsequent event is also specified in every particular. (Of course it might well be the case that in fact we never have such complete knowledge of *all* relevant and antecedent events, and that consequently all our actual anticipations about the way in which an intelligent agent will behave are affected by some uncertainty, greater or less. But—so the determinist would say—this uncertainty of anticipation is not in any way peculiarly characteristic of our forecasts of the acts of persons; in principle it affects all anticipation of events which have not yet occurred, since we never can be absolutely sure that our knowledge of the relevant antecedent events is complete and precise. But this only means that there is the same sort of uncertainty about the choices which a man has yet to make as there is about the issue of a bodily disorder which has yet to run its course.) Any qualification of the assumed principle that the event yet to come is an absolutely determinate one-valued function of earlier events which could, with sufficient knowledge, be precisely and exhaustively specified amounts to a surrender of the principle of scientific determinism.

Let it be carefully remembered, then, that the one and only argument for asserting such determinism is an *a priori* one; it is alleged to hold good for our acts of choice not in virtue of anything which is specifically characteristic of acts of *choice* as such, but because such acts, whatever more they may be, are *events*, and every event is a one-valued function of earlier events. Hence by parity of reasoning the same thing must be equally asserted, on the same grounds, about all other "mental processes," such as intellectual assent to a proposition, or recognition of an inference as valid. These, it is commonly held, are *in*voluntary; a man, we are told, cannot "help" what he believes or thinks, though he can "help" what he does, at least in the sense that he can restrain his body from going through the motions of doing, if he chooses to restrain it. But the processes of assenting and dissenting, of following the "thread" of an argument, in a word, all the processes into which the

psychologist might analyse our thinking, are just as much *events* as the making of "active" choices. Therefore, since the only reason for regarding these last as completely determined by antecedents is that, as it is alleged, *every* event must be thus determined, the conclusion, if it follows at all, must equally hold good for the others. Either every event of my mental life must be completely determined by antecedent events or none need be so—unless some reason for making a distinction can be given of which no determinist has as yet thought, least of all the "scientific" determinist. If he is right in his metaphysical assumption, there can be no relevant distinction between the practical and the speculative uses of "reason"; "free" thought will be as impossible as "free" choice, and for the same reasons.

If the determinist thesis is sound, then, it must follow that it is never possible to consider any issue, however purely speculative, with an "open mind,' intending to pronounce one way or the other strictly, "according to the worth of the evidence." The "worth of the evidence" will always be different for different minds, since for every mind which attempts to estimate it, its probative force will be a one-valued determinate function of past events private to the history of that particular mind. The mere fact that any neighbour *is* convinced of the truth of some assertion (e.g. that Bacon was the author of *Hamlet*, that the "Papists" set fire to London in 1666, that the Rector of the parish is a concealed Jesuit) will itself be the proof that to *him* the evidence for these assertions is irrefragable. To me it may in every one of these cases appear worthless, but there is no assignable reason why my estimate of its value should be more entitled to respect than my neighbour's; each of us appraises it in the only way possible to him with his personal past history, and there is no meaning in the question which, if either of the conflicting appraisements is the sounder. Or at least, if we allow that the question has an intelligible meaning, it is a question which can never be resolved. For even though it may seem to me patent that the arguments by which the other man supports his case are a tissue of contradictions, to him they appear logically coherent and conclusive; as I "cannot help" thinking his "proofs" ridiculous fallacies, so he "cannot help" thinking them inevitable, and as no one can ever consider any thesis with a really "open" mind, a mind which *has* no history of its own in particular, there can be no arbiter to decide between us. We can only "agree to differ."

On the other side, if it is once granted that sometimes, however rarely, a man can sit down to consider the question "is this statement p true, or is it not?" with a genuinely "open" mind, it follows at once (1) that until he has examined the evidence for p and the evidence against p, while he is still engaged in reviewing this evi-

dence, his mental attitude is genuinely one of incomplete determination; it is still really undecided whether he will or will not assert *p*. And (*b*), and this is the point on which I am concerned to insist, when he does succeed in bringing this "discourse of the soul with itself" to a conclusion one way or the other, the *cause* of his decision to affirm or deny, if that is really "*based on* the evidence," is to be found not in any series of past mental events but in the *logical* weight of the evidence *now* adduced. We may say of respect for the logical weight of the evidence what Kant says truly about respect for the Categorical Imperative of moral duty, that it is a cause of a kind nowhere to be found in impersonal "nature." To be a function of antecedent events is one thing, to be a function of logically relevant evidence is quite another.

I can guess well enough how the determinist will meet this assertion. He will say "in assenting to *p* on the ground that the evidence for *p* is convincing, I mean, of course, that what I produce as the evidence convinces *me*; this leaves it perfectly possible that *you* should regard this same evidence as inconclusive, or as being, in whole or in part, irrelevant to the truth of *p*. But I maintain that the previous history of my mind, if fully known, would explain why I cannot but assent that *l, m, n*. . . are relevant and sufficient evidence for *p*, the previous history of your mind why you come to a very different conclusion. You will hardly deny, I presume, the familiar fact that a man's mental habits do in this way create predispositions to belief or disbelief, and if you have admitted this, you have granted all I ask for."

Now I do not propose to deny or question what is indeed a familiar fact, that the mental habits of a lifetime generate such propensities to belief and disbelief. Emotional bias will make it easy for me to overrate the strength of the evidence on one side of a disputed question and to underestimate that on the other side; familiarity with evidence of a particular kind and unfamiliarity with that of another kind will make one quick and subtle in judging the strong and weak points in some classes of cases and obtuse in cases which are not *in pari materia*. I am prepared to admit as at least a possibility that it is only comparatively rarely that I myself succeed in freeing myself from all antecedent bias and estimating evidence solely by its real probative force. What I do deny is that bias is *inevitable*, that *all* judgments, from the nature of the case, are *praeiudicia*. The assumption that they are so and must be so seems to me itself a *praeiudicium*, an assertion made in advance of any evidence which can be produced in its favour and wholly unconfirmed by such evidence. When we look at the facts of our mental life without this prepossession they seem at least to suggest that though the impartial estimation of evidence is often a difficult task,

it is one which can be achieved and not infrequently is achieved by those of us who think at all. Just as facts, on a *prima facie* view, seem to indicate that we all at times do certain things when there is no inducement to do them beyond our conviction that they are morally obligatory, though we all know that devotion to duty is far from being the only motive to action. In both these cases the *onus probandi* rests with the disputant who denies what seem *prima facie* to be the plain suggestions of the concrete facts about human thinking and acting.

If, however, any one persists in denying these suggestions, I do not see how he can be met by a *demonstration* of his error. He can only be shown to be wrong by what Aristotle would call a "dialectical" refutation; it must be established that his own principles consistently applied lead to consequences which are false even in his own eyes. In connection with *scientific* determinism I believe it is possible to provide such a dialectical refutation. Whether, indeed, it will satisfy the condition that the believer in scientific determinism himself shall *ex animo* admit the validity of the argument is more than I or any other man can say, since none of us is an inerrant reader of minds and hearts. But if one may judge from the only evidence we can have to go upon, the *language* habitually employed by such determinists, I think it apparent that when all these consequences are pressed upon his attention he will not be able to avoid admitting their falsity without destroying the whole case for his principle of determinism. I proceed to produce the argument for what it may be worth.

As I have already said, the whole apparent plausibility of the determinist principle depends on its validity as an absolutely inimical principle, applicable without exception to all *process*, *becoming* or *occurring* whatever. Unless it holds good of all process as such there is no reason to suppose it true of the process of taking a decision to act in particular.[1] In fact the *prima facie* presumption would seem to be rather that the principle holds good for processes in general but that these special processes are exceptions—the plain man everywhere tends to the view that, though "nature" may be bound "fast in fate," the human will is left free, as is fully acknowledged, for

[1] To put the argument into "syllogistic form" we may word it thus:

(*a*) Every event is a fully determinate function of antecedent events, and of antecedent events only.

(*b*) Every decision to act in one way rather than another is an event.

(*c*) *Ergo*, every decision to act in one way rather than in another is a fully determinate function of antecedent events and of antecedent events only.

The truth of the conclusion depends entirely on the truth of (*a*), and as far as I can see, no reason can be advanced for thinking (*a*) to be true except that it is *per se notum*, manifest from the nature of the case.

example, by Spinoza in the very words of the famous *Scholium*, in which he dismisses this conviction of the plain man as an illusion begotten by ignorance. Determinists of course try to *reconcile* their thesis with the known facts of human choice and purpose, but it is safe to say that no man was ever led to the thesis by analysis of the special facts about human purposive activity; it is always embraced in *despite* of "appearances," on the strength of a metaphysical theory about process at large; when you attend to the special facts about human purposive activity, and study them, as Aristotle would say, ἐκ των οἰκειων ἀρχῶν, the appearances are *against* the theory, though it is, no doubt, always legitimate to argue that the appearances are misleading. But when the determinist thesis is maintained in the only way in which it can be properly maintained, as a universal principle valid for all process as process, of course it must, as I have said, apply not only to all practical deliberation, but to all mental process at large; "thought" can no more be free from unambiguous determination by antecedent process than "action." It follows that no reasoning ever really proves the conclusion it is adduced to prove; all that happens is that the persons who suffer themselves to be convinced are persons who in virtue of their special original mental make-up and particular acquired intellectual habits, come to the consideration of the reasoning with what Hume calls a "strong propensity" to "view the matter in that light." The opponents who pronounce the same reasoning inconclusive, or frivolous, or sophistical, likewise do so because they have a "strong propensity" to view the matter in a different light. And there is no way of answering the question which of the parties is viewing the matter in the *true* light. Each party yields to what he calls the "force" of certain considerations, but the force to which he yields is not the force of *reason*, and it is precisely because it is not that each can remain eternally unmoved by the arguments of the other. I am not convinced by the conclusiveness of my reasoning; only think it conclusive because it has *de facto* convinced *me*; my opponent, with a different personal history, thinks, and with equal reason, the same arguments inconclusive because they have not convinced him, whose prepossessions are so different from mine. Even an overwhelming *consensus gentium* on one side of a question would not even be a *reason* why, if I am the *Athanasius contra mundum* whose propensity is to take the other side, I should suspect myself to be mistaken. It would only indicate that my private mental history has been different from that of most men. A critic of contemporary Anglican ecclesiastics wittily complained some years ago that the typical "parson" asks himself about every Christian doctrine not *Is this true?* but *Can I get Mr. Jones to see things in this light?* But if the determinist thesis is sound, the only question which the "parson"

can ask about anything is whether Jones can be got to see the thing in that light.

It follows that if the determinist thesis is true, it must be impossible, I will not say to prove its truth, but even to make its truth a whit more probable than its falsity. For if my judgment that the balance of probability is in favour of the truth of p is to have any weight, I must have computed the conflicting probabilities of p and $-p$ fairly, with an *open* mind *not* inclined antecedently to either side, and this is just what determinism, if it means anything at all, declares to be impossible. Unless all estimation of proper evidence is to be idle waste of time, it must be possible to ask the question, If p, *what then*, and if $-p$, *what then?* with a mind so far undetermined between p and $-p$, and the determination for p or for $-p$, when it comes, must be due to something other than any chain of antecedent events. I am willing enough to admit that the successful cultivation of the open mind may be a rarer achievement than we like to confess, that most often our estimation of evidence is vitiated by antecedent bias. We are none of us so single-minded in the pursuit of truth as we would fain persuade ourselves we are. It may be that in nine hundred and ninety-nine cases out of a thousand our assent or dissent is, possibly unconsciously, decided by an antecedent bias which is really irrelevant. But unless, in perhaps the thousandth case, assent can be determined not by antecedent bias, but simply by the weight of the relevant evidence, the completest apparent proof really affords no reason for asserting a proposition, and the completest apparent disproof no reason for denying it.

Oddly enough the determinist commonly sees this quite clearly where any thesis but his own is concerned. It does not perturb him to think that the great majority of his fellow-men reject his theory, or calls his "proofs" of it illusions. He says to himself, "I know *they* think my doctrine false and my arguments for it unsound. But with their prepossessions and their intellectual limitations they could not possibly think otherwise, and I never expected they would. The same considerations equally explain why they think their arguments in the opposite sense conclusive against me, though I can see that they are all mere fallacies. But as these judgements on their part are all the effects of antecedent bias, they are merely irrelevant to the question of truth or falsehood." Yet the very determinist who reasons in this way habitually demands that *we* should accept his own doctrine on the ground that it is *proved* by the reasons which he offers for it. There is no antecedent bias or limitation of intelligence affecting *his* conclusions; *he* has come to them with an "open" mind, though according to his own theory, no one can ever come to any conclusion with an open mind. There is one case in which "belief" is due not to a strong "propension" to view things in a certain light,

but to the logically compelling force of evidence and to this alone, and the case is the case of the determinist's belief in his principle of determinism. It is essential to the case for rigid determinism both that *all* beliefs shall be due to extra-logical causes and that the belief that they are due to extra-logical causes shall not itself be due to an extra-logical cause. For if it were, the determinist would lose all right to expect one to yield to his "proofs."

Well then, if it is possible that assent to a proposition should ever be due simply to my conviction that the proposition is validly proved, why should it not be equally possible that the decision to do an act should be due simply to my conviction that the act is right? If I can ever come with an "open" mind to the consideration of the alternatives, assertion of p, refusal to assert p, why may I not equally come to the alternatives, to do A or to forbear doing A with an "open" mind? If in the first case I enter on the estimation of the evidence with a mind ready to affirm or to deny as the evidence yet to be produced *shall* determine; why in the second may I not enter on my deliberation with a mind ready to will either the doing of A or abstention from doing as I *shall* judge to be right? The two situations suggested are strictly parallel. In both there is an initial stage of what I can only call incomplete determination, or partial indetermination. There is from the first a determination to follow a certain line of policy, in the one case to affirm or deny "as the evidence shall direct," in the other to act or forbear as regard for the law of duty shall require. It is undetermined as yet whether the evidence directs the assertion of p, or whether the moral law calls for the doing of A. As regards the final advance to complete determination, in the first case the determinist himself, however inconsistently, allows that it can be effected, and, so far as his own assertion of determinism is concerned, actually has been effected solely by regard for the rules of evidence. Why then should any one boggle at holding that in the other case the advance to full determination may be effected solely by respect for the law of right, as Kant held that it is effected when an act of true moral worth is done? If either of these things happens, if I ever assert a proposition or do an act simply because of my respect for the laws of true thinking or virtuous living—and it is to be hoped that we all sometimes do both these things—then in the influence of respect for an *ideal* of true thinking or right living on the course of our thoughts or actions we have an example, as Kant maintained, of a causality which is above all the causality of the "sensible world" since, to use Kantian language once more, we are here in presence of action induced "by the *idea* of a law," and it is only intelligent agents, only persons, who can be moved to act by the *idea* of a law.

It is only another way of putting the same point if we say in the

language of Professor A. A. Bowman that it is only persons who can have a *policy*, a *universal* plan in acting and thinking, which pervades and regulates their particular deeds and thoughts. So far as a man's thinking and doing in particular is guided by such an underlying *policy*, it is free from complete determination by the detailed particulars of his own or others' antecedent thinking and doing. One consequence of this is that, as the phrase goes, to a rational agent the "gates of the future are open"; because he has a *policy*, he is not necessitated beforehand by his past acts either to do *A* or to leave *A* undone, until he reaches his decision. But it would not be a sufficient account of his freedom as a person merely to say that he can be determined to action by the future, as no impersonal thing can be. It would, I imagine, be abstractly conceivable that there may be agents whose acts are completely determined for them by some still future destiny hanging over them, boys actually "born to be kings" or to be thieves, as the case may be. But such beings, if they exist, would be incapable of regulating their lives by a *policy*; their doings would be completely determined for them by still future particular events, as the determinist holds that mine are completely settled for me by past particular events. Intelligence, the *universal* in human nature, would not be truly operative in the control of their lives; it would not be they who made themselves either kings or thieves, and so they would not be genuine moral persons, real *domini sui*.

I can once more foresee the retort which a defender of determinism may probably be inclined to make at this point. He may be ready to admit that it is a consequence of his initial postulate that we never in fact come to any decision, theoretical or practical, with a genuinely open mind. We may never emancipate ourselves wholly from the influence of some antecedent bias; may never succeed in yielding or withholding assent according to the weight of the evidence, or in choosing the virtuous course simply because it is seen to be right. But it remains true, I may be told, that this is the *ideal* of the scientific thinker in the one case, of the *honnête homme* in the other. It is an unattainable ideal, but we can and should do our best to make such approximation to it as we can. "A man's reach should exceed his grasp, else what's Heaven for?" However sure I may be that I shall simply in fact assent only to what is "clear and evident" and choose only what is right, I must do my endeavour to come as near to that angelic condition as I may.[1]

[1] Any one who makes this retort is in exactly the position described by Kant when he speaks (*Grundlegung*, § II) of the possibility of doubting whether any single act of genuine moral worth has ever been actually performed by any man. But of course Kant's suggested doubt is meant to be "hyperbolical." It is an *exaggerated* suspicion bred by painful experiences of the frequency of hypocrisy and self-deception. Kant no more meant that it is justified than Descartes that his experimental *dubitatio de omnibus* is justified. It is meant

From any one but the asserter of scientific determinism I might be content with this answer. But from the determinist, so long as he adheres to his metaphysical presupposition I must decline to accept it; it is a proposal which *he* cannot make without stultifying his main position. An ideal of perfectly reasonable thinking or perfect "holiness" of will is none the worse an ideal because I am satisfied that I shall never attain it by my unaided efforts. Indeed, it is all the better, for the ideal once actually attained could no longer serve as an inspiration to future efforts. But if it is to be such an inspiration, I must at least be able to feel sure that by thinking or willing in a certain way I do make an advance in the right direction, as I do not by thinking or willing in a different way.

To confine ourselves to consideration of the "speculative" ideal of determination of assent by the "weight of the evidence": if I am to take the first steps to the goal, it must be possible for me to estimate that weight and to know whether it lies on the one side or on the other of a disputed issue. My judgement on that point at least must, with proper precautions, be independent of antecedent bias. In the particular case I may be always liable to over-rate some of the relevant evidence and to ignore some of it, according to the intellectual predispositions produced in one by my past mental history; this is no more than an unfortunate impediment to the attainment of a truly scientific habit of mind. But unless I can at least judge independently of antecedent bias what sort of alleged evidence is, and what is not, in principle relevant, and again what evidence is really weighty and what is not, I cannot even take the first step towards a "science of the estimation of evidence," and am eternally debarred from all manner of deciding whether what I call the "convincing" evidence for my own beliefs has any more weight than what I call the irrelevant and frivolous reasons alleged by my adversaries on the other side.

But if the determinist thesis is true, and true for the only reason which can be given for it, it must apply to the beliefs which make up my logic of probabilities no less than to all the rest of my mental life. My convictions about the requisites of proof will themselves, like all other convictions, be precise and fully determinate functions of certain particular historical events, exactly as those of my most "unscientific" opponents are. My logic of probabilities and theirs will alike be like all our other convictions, "foregone conclusions"; none of us will have any vestige of right to charge another with false reasoning or error in the estimation of evidence. The making of such a charge presupposes that a science of logic is possible, and that

in both cases that the attempt to doubt everything reveals a certainty which is beyond doubt. The sceptic cannot doubt his own existence as a doubter; the cynic cannot doubt that disinterested obedience to the moral law is a duty.

the principles of the logic by which we appraise the weight of evidence are not dependent for the conviction they carry with them on the past mental history of any man or of all men; they are not true because they have convinced me or any man, but are convincing because they are true in their own right. And, as has been already said, the determinist himself, however inconsistently, recognizes this whenever he makes the claim for his doctrine that it is proved by his arguments, or even made in any degree more probable than its contradictory. If so much is granted, there can be no reason why the consideration of alternatives by an open mind not secretly prejudiced in advance by its own past history which must be possible if there is to be scientific knowledge of truth should not be equally possible in practice, where the alternatives are the consent or refusal of the will to perform an act. Absence of complete and unambiguous determination in advance will, as I said in my earlier essay, be universally characteristic of *intelligent* action. I show intelligence in my mental life just as far as I am guided by the *policy* of affirming only what *shall* approve itself as true and choosing what *shall* approve itself as right, and Kant was fully justified in his assertion that intelligence, embodied in such a policy, is a cause which is *sui generis* and unique.

If Kant's doctrine has up till now failed to win universal assent from serious moralists the fault, I should say, is his own. Where he has gone wrong is in his attempt to connect his *correct* analysis of morally significant choice with the unfortunate doctrine of the "transcendental ideality" of time. No one, whatever he may bring himself to say in words, can seriously believe that a moral decision for good or against it is "only appearance," and least of all men should Kant have had any traffic with such a view. It would make nonsense of his whole contention that in our moral awareness of ourselves as persons unconditionally bound by the Categorical Imperative of duty we get our one and only clue to the nature of the "thing-in-itself." For what becomes of the "primacy of the practical reason," if it is true that there as elsewhere every man "walketh in a vain show"? And the moral life is, after all, only a vain show if the taking of decisions for right or wrong is not bedrock reality; moral action is always something *à faire*, always in the doing, never done, a pressing forward towards a goal which still lies before us in a real future. The moral law might say to the best of us at all times what the poet says to God, "When thou hast done, thou hast not done. For I have more." No one knows this better than Kant himself when he is true to himself as a moralist.

We have to make an option. We may agree with Kant about the intense reality of moral experience, or we may agree with him about the "ideality" of time; we cannot coherently agree with him about

both at once. We may say of the doctrine of Time expounded in the *Transcendental Aesthetic* what Aristotle said to the contemporary Academy about certain of their arguments for the Platonic "Ideas," that the reasoning undermines positions which lie closer to our hearts than the "Ideas" themselves. It is comforting to myself therefore that the argument of the *Aesthetic*, so far as it proves anything at all, is, as has been shown by Professor Prichard, one long *ignoratio elenchi*. Kant has proved only what no one would seriously think of denying, that temporality is universally a form of the perceived, or, as he calls it, intuited, world of sensible things; he has given no reason which will stand examination for the conclusions he believes himself to have proved, that temporality is a form of *perceiving* (or *intuiting*) as distinguished from that which is perceived. Indeed, it might not be too much to say that what Kant describes in the *Aesthetic* is not even time as we know it in our acquaintance with the world of bodies around us. It is mere *successiveness* without the *continuance* which is rightly recognized later in the *Analytic* as equally characteristic of the "objective" world, not time itself, but the mere ghost of time which figures in our text-books of physics as the symbol *t*. If the doctrine of Freedom as expounded in the second *Critique* and the *Fundamental Principles* seems to Kant himself barely intelligible, this is due to no defect in that doctrine itself, but only to Kant's inability to forget that he had entangled himself in advance in the fallacies of the *Transcendental Aesthetic*.[1]

[1] I do not think that Kant's position is really affected by the difficulty (dwelt on, e.g., by Rashdall) of saying in what sense the act of the man who yields to "inclination" is free (as it must be in some sense if he is to be held morally answerable for it). We have only to bear in mind that freedom means freedom *from* restrictions of some kind, and that an act which is free in the sense that it is not hampered by restrictions of one kind may yet not be free in the sense of being unhampered by other restrictions. *Any* specifically human act, right or wrong, is free from the restriction which we commonly suppose to affect all the so-called "acts" of the "brute creation," complete absorption in the "particular passion" of the moment. It is *consciously* forward-looking, and involves some contemplation of an alternative, and this is enough to make it responsible. But the act dictated by "inclination" against "practical reason" is not free from what Plato would call the domination of the "reasonable principle in the soul" by an *ἐπιθυμία* which does not originate with itself. The man whose act it is is not, in the ethical sense, *dominus sui*, *κρείττων αὑτοῦ*.

THE SPIRITUAL BASIS OF DEMOCRACY

Professor LOUIS ARNAUD REID

In this article I shall employ the word "spiritual" for want of a better. It is not a particularly good word, for it is "emotive," stirring up sentimental feelings in some people and causing the sympathies of others to shut up like clams. "Personal" is in some ways less objectionable, but a title like "The Personal Basis of Democracy" might suggest a thesis other than I have in mind. Nor is the word "moral" nearly wide enough. As to the meaning of "spiritual" all I can say now is that my readers will have at least some idea of what I am referring to by the time they reach the end of the article.

There are, I think, two distinct meanings of "democracy." I propose also to distinguish provisionally a third. All three, although distinct, bear a close relation to one another.

There is (*a*) *political* democracy, a form of political organization which by one method or another provides for the government of a (supposedly) "free" and "equal" people by its own freely appointed representatives. There is (*b*) *social* democracy, by which I mean the general *form* of a society in which ideals like the freedom and equality of men—a fair chance for every one, justice, free thought and discussion, security—are held to be important. That large part of social life which lies outside the jurisdiction of law is in social democracy chiefly determined by these principles. And though any given political or social democracy may in practice fall considerably short from its democratic principles, we call a state or society "democratic" which embodies them in some substantial measure. In practice there is not as a rule much difficulty in determining whether such and such a state is politically or socially "democratic" or not.

(*c*) The third distinction which I shall make is that of what may for shortness be called *moral* democracy. Clearly moral democracy must be closely connected with the others, since social and political life fall within morals; yet it is of the utmost importance to distinguish it from them; for, as I shall show, political democracy may become dissociated from social and from moral democracy, and when we say we are fighting for "democracy" we may very well be thinking of political or social democracy without keeping in mind the connection between these and moral democracy.

The name "moral democracy" is not unobjectionable. I use it merely for brevity's sake, and I shall try to bring out its real nature later on. It is really a concertina-term standing for something like "the

positive moral or spiritual qualities which the persons living in a social and a political democracy must possess in order to justify these and to realize the best kind of individual, social and political life." The character of a democratic society depends not only upon institutions, organizations, conventions, but upon the spirit and outlook of its individual members, and this in turn depends upon what they really care about, what they think to be most important. "Moral" in this sense thus includes the life of the spirit in all its aspects, and it is here roughly synonymous with "spiritual." I am not at this very moment in this paragraph attempting to say what this spirit and these ideals should be;[1] still less am I at this moment attempting to demonstrate or even to illustrate that healthy social and political democracy are nothing but the social and political forms which make such a good life possible and which to a limited extent express it. We are concerned now only with a very important distinction and assertion which may be allowed to take its chance of being accepted or rejected.

And it is important, as I suggested, to make these simple distinctions and assertions. If we do not, we shall not be able to see clearly how the different senses are related, and failing to see what are first things, we shall consequently fail to put first things first. Political democracy, it seems pretty plain, is hollow and ceases to be a "good thing" if it is not expressive of social democracy, and actual social democracy (I am dogmatically affirming) is good in so far as it realizes moral democracy and weak or evil in so far as it falls short of it. On the one hand it is futile to think that we can cure all discontents by providing democratic constitutions for peoples who have not as yet learnt the obligations of democracy, and on the other hand, when a *de facto* democratic instrument of state loses touch with the society which it is supposed to represent and begins to play the game for its own corrupt ends, wheels within wheels, it loses the confidence of the people and ceases to be democratic. This stricture would apply to France of recent times, but would not apply to ourselves. Nevertheless, we in Great Britain may very well suffer more than we know from too great a separation between our political and social democracy on the one hand and *moral* democracy on the other. Our Government certainly is, with some defects, representative of a free people, but it is much more doubtful whether our free people in their individual and social life realize the terrifically high obligations which free people ought to fulfil if democracy is to be the fine thing it could and should be.

There is nothing *moral* in either a political or a social form of democratic life *as such*. These forms are justified only in so far as they condition and up to a point embody what is not themselves.

[1] See below, p. 42.

(I shall return to this in a moment.) Nor is there necessarily anything moral in the motives which originally brought them about. As regards their history, I should here like to quote from an interesting private letter from a friend. Controverting the opinion that there is anything intrinsically noble about (social and political?) democracy, he writes, "It looks as if in the small beginnings of democracy in Attica it was not spiritual but economic causes which displaced the totem-pole by the parish pump and the blood-brotherhood by the village commune. In any case, although the city-states produced a glorious flowering of patriotism and in the worlds of thought and art, in other ways they fell far short of what we mean by the democratic ideal. And what about our own rediscovery of freedom and democracy? It is no merit in us that history and geography closed our ranks and forced us to act together and to cultivate some of the democratic qualities like patriotism and the practical give and take which is the basis of political capacity. In most respects we were luckier, but not necessarily better than our present enemies, like a boy brought up in good conditions compared with a storm child. But there was nothing perceptibly moral about the jury system or independent judges or the summoning of Parliaments: some of these may have been if anything anti-religious. No doubt the deep religious feeling of the Puritans gave a moral quality to the struggle for political liberty, and the Wesley revival lent great force to humani tarian reform. But this only goes to show that morality and religion can powerfully reinforce democratic ideas. Can democracy breed them? Its own non-moral beginnings do not, I suppose, close the question. We must look to the fruits not the roots, you philosophers tell us. . . ."

It is, I think, true that we must look to the fruits not the roots.

This statement is, I think, valid—so long as we do not exclude moral glimmerings or try, like the communists, to explain all development in terms of one motive. And it is salutary to remember it when we democrats are inclined to preen ourselves on our superior virtue. Yet the metaphor of fruit and root, though it expresses one facet of the matter, is in another way misleading. The metaphor is applicable in that, as the fruit comes in time *after* the root, so perhaps the ripe fruits of democratic forms are gathered later rather than earlier in time. On the other hand, even although democracy did not originate from explicitly or purely moral motives, yet unless the potentialities of the conditions of moral good were already within the democratic forms, good could hardly have later been discovered in them. (One *could*, of course, say that the potency of the fruit is in the root, but I will not labour an analogy.) Although democratic forms are not in themselves and as such intrinsically good, they may be said to be in their very nature instrumentally good, or "good" in so far

as they are conditions for intrinsic good. The nature of the intrinsic good which they condition is at first not fully grasped; it is only discovered through time. Discussion is found to be better than solitary opinionation. Co-operation discovers friendship. They teach respect for the truth that truth can only be reached if we are prepared to face opposition and difficulty. That, above all and beneath all, is the discovery of the value of freedom as a condition of individual and social moral health.

It is only in so far as the intrinsic good which the democratic forms condition is discovered, that the potentialities of the forms are realized, and we come to value them more and more as precious, to be defended at any cost, as the very conditions of human living itself. In this discovery in Western Europe no doubt Christian teaching played the most important part. But perhaps the Puritans and the Wesley revivalists may be said not so much to have "reinforced" ideas which were explicitly there (though they did do this) as to have elicited, brought out the spiritual implications and applications of democratic ideas. Their Christian experience gave them insight into certain moral and religious absolutes, and they came to see that only under far more humanitarian and "democratic" external conditions of living could these values be realized by men. But it was because democratic conditions actually *were* such as could condition better living, that they were recognized to be "good." (And, of course, the increased insight into moral good meant not only recognition of the potentialities of democratic forms already in existence, but increased demands upon democratic structure itself. Democratic structure becomes or should become modified and refined as time goes on.)

So, if we rightly defend and fight for democracy, it is not for political and social democracy in themselves, but for these as conditioning, as affecting opportunities and encouragement for, and in a manner expressing a kind of living which we judge to be intrinsically good. If we are right and this good *is* good, it will be good for all men. It may be called universal, and is something to be aimed at for all. This does not mean either that all men have yet reached the level of moral development at which this good can be realized (we have certainly not reached this stage ourselves), or that social and political democratic forms are suitable for every stage of growth. Both are to be won. But the direction of sound progression is clear—always supposing that we are right.

The difference and the relation between moral democracy and the others may be brought out by comparing their respective excellences or virtues. The excellences of political and social democracy (without insisting on the differences between the two) may roughly be said to be bound up with freedom, justice, equality, security. These

we often praise for their own sakes, as though they were intrinsically good. But this is a false abstraction. Actually they are nothing of the sort. They are, as we said of social and political democracy in general, conditions of the possibility of good, and it is moral to promote them for this reason. Freedom (to think, speak, write, and within limits to act) is not good in and by itself. It is good only because (among other things) it is a condition which is essential for development of personality, thought, will and action. As free thought may be mistaken and free action may be wrong, social and political freedom may be a condition of evil as well as of good: yet this possibility is fully taken into account in pronouncing freedom to be good. Freedom *implies* the possibility of error and wrong, yet freedom with the possibility of error and wrong is judged—as it is also judged in the purely moral field—to be better than deterministic impeccability.

Political, legal, and social justice, equality (in some sense) and security are likewise essential conditions for human living of the best kind.

The virtues of moral democracy, on the other hand, are quite distinct from these others, and they possess not conditional but intrinsic good. They are nothing less than the very fruits of the spirit itself, love, joy, peace, long-suffering, gentleness, goodness, faithfulness, righteousness, truth.[1] (There are many others more obvious; for example, the self-reliant virtues, but these are less likely to be overlooked.) These virtues are intrinsically good; yet they are conditional too, as we saw. They are the condition of the vitality and health and goodness of social and political democracy.

It seems to me that in our planning for the future we do constantly ignore this. I am not depreciating planning (where it can and should be carried out—a question not so easy to determine). I am, on the other hand, concerned with the little attention which is given to the form and pattern of living itself. We dwell, and rightly, upon the necessity for greater freedom, better conditions of living, security, social justice for much larger numbers of people. And we assume that when we *get* these and other better conditions, all will be well. But *will* it? The emphasis (with exceptions here and there) is all upon getting, taking, receiving, and very little upon the spirit which alone will turn these great benefits to good, upon the profound moral responsibilities which are the return for privileges. Can a people really flourish which forgets this?

It may be answered that the moral basis is taken for granted, that "we are all Christians here," and also that the first thing is to carry through the reforms, and then by education to teach the people how to make the best use of their advantages. But it is not so easy as

[1] I am adding together the two Biblical lists.

that. The fruits of the spirit are not to be taken for granted. It is the utmost presumption for any one to assume without further ado that of course his principles are "Christian." The assumption is its own refutation. The saint or the moral genius *might* speak with authority of such moral principles, but social reformers neither could nor do claim this authority. It is only possible to take so-called "moral assumptions" so lightly if there is a thoroughly superficial understanding of moral and spiritual values. These are not the simple precepts they are so often imagined to be, which, once discovered, can be passed down from generation to generation. And they are not the professional prerogative of the parson or the preaching moralist. The fruits of the spirit must be rediscovered and re-created in the secret places of each individual mind and heart. And the form of the individual life lived in such knowledge is subtly but radically different, different *toto caelo*, from moral life supposedly based upon rules learnt long ago in the past, half-forgotten, and with facile assurance taken for granted.

If this is true of individual life, it must have a bearing on the question of the quality of social reforms which in the end do reflect the inner *morale* of a people. The form of a better society for the future cannot be merely a set of cut-and-dried improvements in the mechanisms of social structure and in the amenities of living. It is bound very considerably to reflect in its conception, in its administration, and in its reception by the people, the spirit of the human beings who in any of these or other ways have to do with it. And the spirit is in the end the spirit of individuals—blind, half-seeing, complacent, discerning, as the case may be.

To say that the form and quality of social reform depends upon persons, and to suggest by implication that social reform can never be or do its very best if both social reformers and those who receive the benefits of reforms are not endowed in the highest degree with spiritual excellence, is certainly not to go as far as to assert that short of this ideal, reform is worthless. If we did think so, we should have to postpone social betterment for ever. Yet though we cannot achieve perfection, to set its standards before us is to show us how far short we fall, and to stir us to better efforts. A society which takes its moral standards for granted and assumes without self-examination that its plans for a better world are soundly based upon them, is likely, when social reform does not produce the satisfied life which was hoped for, to become disillusioned and bitter and weary of itself. A society in whose members the idea of the life of the spirit at its best is so noble that they constantly realize with humility and new resolve how far short it is from being the externalization of that spirit is not likely to die of inanity. Given positive inspiration, it is more likely to go on from strength to strength.

In spite of what has been said, there may remain in the background a lingering doubt. *Is* there such an intimate relation after all between democracy and the finest and best life of the individual spirit? Is it not false, unrealistic, perhaps even sentimental, to make the reality of democracy depend upon the individual realization of such high-falutin ideals? Is not our own democracy truly democracy even although the freedom it gives is so often employed for ends much less noble (not to say ignoble) than these? Or, in other words, is not democracy still an affair of political and social freedom, equality and the rest, a state of things which—within limits, of course—still leaves the individual to himself, which still leaves his own morality as his own private concern and as something which does not affect the independent reality of social and political democracy? Is not, in fact, "moral democracy" an entire misnomer, because private moral life and democracy have no intimate and internal relations?

I am willing to agree that the provisional and shorthand term "moral democracy" is in some ways unsatisfactory, but not for the reasons just stated. The term is unsatisfactory because in private inner life the word "democracy" is inappropriate. No analogy is intended here, such as Plato for his own special reasons offers to us in the *Republic*, between social and political democracy and the individual soul. The life of the spirit is *sui generis* and cannot be reduced to political terms. So perhaps we ought, if we want to be very accurate, to drop the term "moral democracy" altogether and speak only of the individual spiritual life in society and politics. (For brevity's sake I shall go on using the shorthand term where necessary.) Yet this would not be satisfactory, either, for the very fusion of two ideas in "moral democracy" is significant. What we want to understand is the *connection* between spiritual life and the forms of social and political democracy, the connection which is denied in the last paragraph. We cannot drop the term "moral democracy" on the grounds that there is no connection between social and political democracy and the moral life except perhaps a negative and external one. There is a connection, and a very intimate one.

The imaginary objector contends that a democracy is a democracy whatever the character of the private life of its members—moral or immoral—may be, so long as there is enough freedom, justice, and the rest. Ours is a democracy, and most of us are very "unspiritual" indeed. Q.E.D. Yes, but the whole point is, "How *much* of a democracy is it, and how far do not its defects flow from the very spiritual deficiencies of our own people?" "Democracy" is not an absolute term; it is only a limiting concept within which there are many degrees. It is not good enough to suppose that because we have

sufficient of the excellences of social and political democracy to enable us to be entitled democratic, therefore our democracy is true and full democracy, that this is compatible with numberless moral faults, and that in consequence true democracy can't have much to do with individual morality.

The most superficial survey shows the measure of such complacency. Freedom, justice, equality, security. Certainly the great democracies have much of them, have more of them than other countries, and have much to be thankful for. But is the very poor man as free as the comfortably-off man? Is not the right to a living wage often denied? Are not some laws (against poaching, for instance) framed on purely "class" lines? Has the small wage-earner the security needed to live a full life, a life not dogged by constant anxiety? Has every child under present conditions a chance of the education suited to his mind and needs? Are relations between employer and employed always a mirror of the democratic excellences? In general, does a democratic society do what a democratic society should do, namely, provide the conditions under which full and free spiritual development may be sought by those who wish it?

The answer is obvious. And the reasons are equally plain upon a moment's reflection. They are, lack of sympathy, imagination and understanding, selfishness, greed, exclusiveness, class-feeling, callousness. These vices are not for the most part fully conscious, but they are culpable none the less. The conditions described are undemocratic because they contradict the very principles of democracy. And the plain and evident reason is that the private spirit or morality of individuals does after all matter very much, does in fact make all the difference between a democracy that works in every part and a democracy in general form and name only. Imagine the situation reversed (I need not work it out here). Imagine a society composed of men possessed of all the Christian virtues.

A true and thorough working democracy would imply the highest spiritual qualities in the individuals who should compose it. Conversely such qualities expressing themselves socially and politically would constitute democracy. Anything less than this is a defect. A single selfish person, a single selfish act, makes democracy in the fullest sense the less democracy.

"Moral democracy," then, is not a happy term if it refers to the life of the spirit in itself, but if it refers to these spiritual qualities as entering into and transforming social and political life, then indeed it is significant. The society thus leavened would not be so very different, if at all, from the kingdom of heaven upon earth.

This view of democracy is not only in sharp contrast with the current one. Vital belief in its truth would also make our progress in the future very different from that in the past. Our democracy (as

has been recently suggested) has grown up piecemeal out of piecemeal sense of *in*justice. Now sense of injustice is not without its morality, since it is morally justifiable to feel angry at injustice and to take steps against it. This morality, however, is usually very crude, very limited, very self-centred, and overlaid with vengeful and retributive feelings of all kinds. Sense of injustice is very far from being sense of justice. It tends to correct one injustice by the imposition of another. The exploited become the exploiters. Social progress has in considerable part been like this. We think of elected representatives as standing for our "interests" rather than for the greatest good of the greatest number. Our social progress has largely been a "dialectical" process in which antithesis is opposed to thesis, and synthesis in time becomes the thesis for another antithesis. In this process we may get correction and greater approximation to justice, but this movement is very different from one which is determined from the start by calm and sympathetic and objective vision of truth and justice. To possess such a sense of proportion would be to possess at least some of the capacities not only for quicker but for surer building. And these capacities when fully worked out are the spiritual qualities we have been discussing.

WHITEHEAD'S PHILOSOPHY: *Eternal Objects and God.*

SYDNEY E. HOOPER, M.A.

THE Universe cannot be exhaustively analysed if we stop at actual entities or even societies of actual entities which, as we shall see later when we discuss the notion of 'nexus,' are equivalent to what we ordinarily mean by enduring objects such as a stone, a tree, or a man. There is another class of entities which plays an important part in the constitution of the Universe called 'eternal objects,' and we must now proceed to an understanding of these.

Let us first note two descriptions which Whitehead employs for eternal objects. They are described as "Pure Potentials for the specific determination of fact" or "forms of definiteness." That is to say, they are forms which determine the specific character of any actual entity, or which determine the 'kind' of feeling the subject of any occasion experiences. Eternal objects are those entities which make it possible for there to be anything in the world of space and time which can be a definite 'this' or 'that.' They enable us to say 'what' a thing is, and to describe its character. All the events and things we commonly regard as temporal are not *exclusively* spatial and temporal. They have an eternal element in their constitution; and it is through this eternal element that we are able to discriminate the differences and qualities of events. It may be said that the things which are temporal arise by their participation in the things that are eternal. Perhaps the best way of approach to an understanding of these eternal entities is to recall briefly Plato's doctrine of 'ideas' which corresponds closely to Whitehead's doctrine of 'eternal objects.'

Heraclitus,[1] the philosopher of Ephesus, who lived during the period 535 B.C.–475 B.C., regarded reality as a process of flux or change, and compared the course of nature to 'an ever-rolling stream.' Nothing abides or is permanent: there is only a process of continual change. Plato, a hundred years later, saw clearly that a doctrine of universal flux involved the impossibility of knowledge. There could be no knowledge if there is nothing that abides, for if all things are in flux, any statement about things would cease to be true at the very moment of utterance, since they would have changed into something else, even before the statement in words was finished. He

[1] The brief account of the connexion of Plato's ideal theory with the doctrine of Heraclitus in the next two paragraphs is derived from *History of Philosophy*, by Clement C. J. Webb (*Home University Library*).

therefore searched for a way out of such an impasse, and he found it in a direction which had been indicated by Socrates. Socrates' passion was to establish morality on a sound basis, and to rescue it from the sophistry into which it was in danger of falling in his day. Protagoras was teaching that in regard to such questions as the 'right,' the 'good,' 'justice,' etc., man was the measure of all things. This was equivalent to maintaining that there were no abiding moral principles, and that morality was simply a matter of opinion. But Socrates saw that if such statements as 'This is right,' or 'This is just,' are to have any meaning, *right* and *just* must mean the same thing whenever the terms were predicated. Hence it was of the utmost importance to make clear what men meant by such predicates, and then to fix the meaning by a *definition* of each.

It was the claim made by Socrates that moral predicates such as 'right,' 'just,' 'good,' and so forth denoted characters which were permanent and unchanging that indicated a way out of the difficulty of the possibility of knowledge which had arisen from the doctrine of Heraclitus that "all things were in flux." Plato agreed with the view that all things apprehended by the senses, sight, hearing, touch, etc., were in flux, and that, therefore, the senses could not claim to give knowledge. But, he pointed out, such entities as the moral predicates 'right,' 'just,' 'good,' were certainly not things apprehended by the senses. On the contrary, they were apprehended by thought: they were the objects of conceptual, not sense experience. Plato extended the socratic method of achieving knowledge of those features of reality which were permanent and abiding, from the realm of morality to the realm of knowledge in general. He argued that when we perceive a quality such as 'white' or things such as a 'tree' or a 'man,' what we perceive with the bodily senses on each occasion is only a *particular* patch of white, a *particular* tree, or a *particular* man. Nevertheless in all these experiences, we think we recognize a nature which we know—'whiteness,' 'treeness,' 'humanitas,' but this nature is not an object of the senses but of the understanding. It is apprehended by thought, and not by the eyes or ears or any of the other senses. Plato, therefore, concluded that besides the world of sensible things ever shifting and changing there is another world of permanent 'forms' about which we can have genuine knowledge. Indeed he taught that a knowledge of these forms was presupposed in all the experiences which came to us through the senses. Just as I cannot recognize a 'right' act unless I know with the understanding the 'form' of rightness, neither can I recognize a particular man unless I know with the understanding the 'form' of man in general, the permanent nature or essence of him. Again, in order to *think* that the line

A B is straight, or that a given geometrical figure is square, we must *know* what straightness or squareness is. In all these examples there are permanent natures apprehended by the understanding and not by the senses. These permanent natures were called by Plato 'Ideas'—forms (ἰδέαι) and constitute the foundation of his philosophy.

The 'ideas' are the contents of general notions, the universal as distinguished from the particular. Such contents were regarded by Plato as real existences. They do not vary or change. By their nature they are removed from the contingency and arbitrariness of ordinary empirical experiences, and *true* knowledge (ἐπιστήμι) consists in knowing them. Plato held that sense experience was not genuine knowledge but mere 'opinion' (δόξα), an experiencing of that aspect of reality which is in flux rather than an understanding of its permanent and abiding nature. It is the 'ideas' that, for Plato, constituted the real world of existence, for they are the unchanging universal constituents of reality. They are eternal, not apprehensible by sense, but by reason alone; each 'idea' is an absolute unit admitting of no division, and of no alteration, and together they constitute a 'realm,' which is the inner nature of reality.

Whitehead admits that the antithetical terms 'universals' and 'particulars,' which we have seen have their origin in Plato's philosophy, are the usual words employed in western philosophy to denote respectively the entities which nearly, 'though not quite,' correspond to the entities termed in his own *Organic Philosophy*, 'eternal objects,' and 'actual entities.' They are, however, not quite accurate terms for his own philosophy. I will quote his own words on the subject:

"These terms, 'universals' and 'particulars,' both in the suggestiveness of the two words and in their current philosophical use, are somewhat misleading. The ontological principle, and the wider doctrine of universal relativity, on which the present metaphysical discussion is founded, blur the sharp distinction between what is universal and what is particular. The notion of a universal is of that which can enter into the description of many particulars; whereas the notion of a particular is that it is described by universals, and does not itself enter into the description of any other particular. According to the doctrine of relativity which is the basis of the metaphysical system of the present lectures, both these notions involve a misconception. *An actual entity cannot be described, even inadequately by universals; because other actual entities do enter into the description of any one actual entity. Thus every so called 'universal' is particular in the sense of being just what it is, diverse from everything else; and every so called 'particular' is universal in the sense of entering into the constitutions of other actual entities.* The contrary opinion led to the collapse of Descartes' many substances into Spinoza's one substance; to Leibniz's windowless monads with their pre-established harmony, to the sceptical reduction of Hume's philosophy—a reduction effected by Hume himself and reissued with the most beautiful exposition by Santayana in his *Scepticism and Animal Faith*."[1]

[1] *Process and Reality*, p. 66.

From the passage quoted, it will be evident that Plato's 'ideas' correspond closely to the 'eternal objects' of Whitehead's philosophy. In explaining the grounds for the postulation of a realm of eternal objects, Whitehead says that not only in any scheme of nature must we allow for the two facts of *change* and *endurance*, but we must also recognize a third fact which he calls eternality. An example of something that is eternal is colour. Contrast a colour with a physical existent like a mountain. The latter may endure for ages, but given sufficient time it gradually wears away and finally vanishes. A colour on the other hand, say a specific shade of blue, is exempt from the ravages of time. It is eternal, coming into the world when it is wanted by Nature, and disappearing when its function for the time being is over; to return again when its presence is once again relevant. But when it returns, it is the *same* colour. Another example of an eternal object is what we call the 'shape' of a thing. Consider the shapes which we call 'roundness,' or 'elliptical,' or other geometrical shapes. These forms do not 'emerge' from Nature, although Nature requires them to give definiteness to its processes. Rather they invade Nature from the eternal realm of forms when they are wanted. In Whitehead's language they 'ingress' into Nature. When the actual occasions which they characterize have passed away never to return, the specific shape also disappears, but the 'same' shapes 'roundness' or 'ovalness' reappear when they are wanted to lend their forms to other occasions or events. It is because of the eternality of such forms that Whitehead says eternal objects "haunt time like a spirit." As I look out into my garden, I observe the specific shape of the leaves of the walnut tree in the drive, and the specific pink colour of the monthly roses on my front lawn. These are eternal objects. Neither the shape nor the pink colour were visible two months ago, for this year's leaves and this year's roses were at that time not yet out. But the 'same' shape and the 'same' pink colour characterized last year's walnut leaves and roses. The leaves and roses this year are not the actual leaves and roses of last year, but only their shape and colour are the 'same.' The actual leaves and roses of last year were events which endured for a time and then as we say 'died.' The leaves and roses of this year are new events which will also endure for a time and then pass away for ever. It is clear, therefore, that such entities as colour and shape are different from temporal things. They belong to another realm. They are pure 'potentials,' and in their ultimate nature are eternal. We can only know these eternal objects when they ingress into Nature—lending themselves for the time being—to give some form or character to a transitory event. But they themselves are not transitory. They are always eternally the 'same' at whatever different 'places' they appear

and whatever intervals of time separate their recurrent appearances.

Eternal objects, then, are such entities as colours, sounds, scents, geometrical characters. When feeling is in question, it is the eternal objects which define the varying kinds of emotion and intensities of feeling and provide the 'forms' of different pleasures and pains. In their function as determinants of feeling, they indicate 'how' experience is felt. For example, to refer back to our description of an actual entity in a previous article, an eternal object functioning as a determinant of feeling, would indicate 'how' the subject of the actual entity is feeling or prehending the data presented for synthesis.

Although the term 'Platonic form' is the briefest way of indicating what Whitehead means by the entities he calls 'eternal objects,' he makes it clear that the entities in question are not necessarily restricted to those which Plato would recognize as 'forms.' Whitehead's conception is defined by him in these words: "Any entity whose conceptual recognition does not involve a necessary reference to any definite actual entities of the temporal world is called an 'eternal object.' " With this quotation the preliminary explanation of the term may be concluded.

The Transcendence of Eternal Objects

Suppose an eternal object—say a specific shade of red—is in any given actual occasion the colour found with a spherical shape (another eternal object). The actual occasion in which the shade of red and the spherical shape are mutually implicated does not prevent both the same colour and the same shape from characterizing other occasions, either together or separately at different times. That is to say, many occasions may be both red and spherical, or again, many occasions may be characterized by a spherical shape, but not be red. This being so, it is clear that an eternal object is not exhausted by its ingression into any particular occasion. It can ingress into many occasions at the same time or at different times as it is required. This means that eternal objects are transcendent: they are not tied to this, that, or the other actual entity, but are free to characterize a multiplicity of actual entities without loss of any of their essences. Now it will be apparent that what transcends specific actual occasions must be quite different from specific matter of fact. Their essential natures reveal themselves as superior to spatio-temporal limitations. They are not like physical processes which have a beginning and an end. On the contrary, their mode of being is such as to be indifferent to the flux of events which come and go. Although they determine the 'forms' of events, they themselves are not events: they are potentials for the determining

of matters of fact, but they themselves are not matters of fact, and in regard to their ingression, they are quite neutral concerning any particular actual entity of the temporal world. Indeed the defining mark of an eternal object is just this—that it is an entity that does not involve a necessary reference to any definite actual entities of the temporal world. They determine by their 'ingression' the forms and qualities of things, but since they are eternal they altogether transcend exemplification in any particular actual entities in the world. What has been said follows from their definition as pure potentials.

Thus far we have indicated that eternal objects can be discovered by us through reflection on the doctrine that the qualities and geometrical shapes of things, as well as the various types of emotion and kinds of feeling-intensities experienced by a conscious mind, are exemplifications of universals and transcend particular occasions of matter of fact. But Whitehead reminds us that eternal objects also come to light in untrue but *significant* propositions. Theoretically it is possible to make untrue propositions about a thing or event. But untrue propositions need not be nonsense: on the contrary, they can be highly significant. For example, if you assert of this white tablecloth that it is blue, you are saying something untrue, but significant. Significant because tablecloths *can* be blue, and there are, in fact, blue tablecloths. That is to say, an untrue proposition can have real import, and be expressive of something. In short, untrue propositions, so long as they are predicated *significantly* of a given occasion "A," are *alternative suggestions*, and such alternative suggestions inform us that the occasion A is set within a realm of alternative interconnected entities. All the untrue significant propositions concerning an actual occasion reveal to us this wider interconnected system in which A has its place. But if a realm of alternatives is brought to light by untrue but significant propositions concerning any actual occasion, it is clear that the actual occasion in question cannot be fully understood without reference to its setting in the larger interconnected system of entities. In other words, the understanding of actuality requires a reference to *ideality*, and this ideality is the realm of alternative suggestions disclosed by untrue but significant propositions. This realm of alternative suggestions is the realm of eternal objects—it is the realm of possibility contrasted with the realm of actuality. Both realms, says Whitehead, are intrinsically inherent in the total metaphysical situation in which any given actual entity is involved. The realm of alternative possibility brought to light by untrue but relevant propositions cannot be dissociated from what the actual entity as a definite achievement is in its own nature. It cannot be dissociated because the valid *denial* of certain relevant untrue pro-

positions in respect to a given actual entity may be such as accurately to express, declare, and bring to light the essential truth of its nature. By truly denying alternative possibilities, the genuine character of the actual entity in question stands boldly out.

It is instructive to notice that the relevance of the realm of alternative possibility in regard to the settled actual world, is clearly evident in art. In a great imaginative poem what "might be" but is not is the very essence of the poet's work. And a great painting, sculpture, or musical composition draws aside the veil that divides the temporal from the eternal, giving a momentary vision of more satisfying possibilities. Finally in the domain of conduct, when the Prophet reveals to his people a nobler life than that which they are at the time living, he is disclosing to them finer alternatives which have their abode in the eternal realm of possibility.

Eternal objects, then, are such transcendant entities as shapes, colours, sounds, smells, touches, tastes, apprehended by means of the senses, as well as types of emotion, kinds of intensities of feeling, and so on. They also include, as we have just seen, the entities revealed by untrue but significant propositions and by 'ideals.' They are transcendent because their essences are comprehensible without reference to any *particular* occasion in which they may be exemplified. The realm of eternal objects, although transcendent must not, however, be thought of as dissociated from actuality altogether. This would be an entire misunderstanding. The two realms—the actual and the possible—are intimately connected in the general metaphysical situation. Indeed, every eternal object is related in some degree to every occasion. Some eternal objects may be connected with a given occasion more fully and completely than others, because they are especially relevant. But even those that are not so urgently required are nevertheless included in some degree or other. For every actual occasion is a synthesis in itself of the whole realm of eternal objects according to what may be called the principle of degrees of relevance.

For a clear understanding of the doctrine of the inclusion of the whole realm of eternity in every actual occasion, it is necessary to show that the multiplicity of eternal objects must be regarded as an inter-related system, and that the system as a whole is implicated in the ingression of even one eternal object into any actual occasion.

The Twofold Nature of Eternal Objects

We must note in the first place that an eternal object has a twofold nature, which can be studied in its double aspect as possessing on the one hand (*a*) an *individual* essence, and on the other hand (*b*) a *relational* essence. By its individual essence is to be understood

the 'uniqueness' of each eternal object. It is just what it is, and nothing else. The eternal object, for example, which is a specific shade of green, is unique. It cannot be other than it is, and whenever it ingresses into Nature it always appears as this definite shade. The same remarks apply to an eternal object which is a specific 'shape,' e.g. spherical, or an eternal object which is a definite kind of emotion, e.g. anger. Both are also unique, and the uniqueness of each is the individual essence.

The 'relational' essence of an eternal object is to be understood in this way. The metaphysical status of eternal objects is that of 'possibilities' for realization. They are entities whose natures are pure potentials, but as potentials they are ever ready for actualization whenever appropriate conditions occur. They have no meaning apart from their meetness for actualization, and apart from their general relation to actuality. Although *qua* pure potentials they do not belong to the existing world of space and time, yet it may be said they have a yearning or an appetition to invade the territory of space and time and to supply forms of definiteness to the otherwise formless flux of events. Indeed, every actual occasion is defined as to its character by *how* these possibilities are actualized for that occasion. If we are seeking to know 'what' a given actual entity is, then we must be able to say *how* a selection of eternal objects 'ingress' into the actual occasion under consideration, and how this selection is 'graded' in respect of complete or partial realization. The notion of the graded realization of eternal objects is important, and is the key to the understanding of the 'relational essence' of an eternal object. The *modus operandi* of the 'graded entry' of eternal objects into the constitution of an occasion is bound up with the fact that the eternal objects form a relational system or realm. An eternal object considered as an abstract entity cannot be divorced from its reference to other eternal objects (or indeed from its reference to actuality generally, though it transcends its actual modes of ingression into *particular* occasions). It cannot be divorced because its 'status' as such is due to its relationships with all the other eternal objects. It would not be what it is were it not for the general systematic complex of mutual relations. A part of its very nature, namely, its 'relational essence,' is constituted by this system of relations. These relations are what Whitehead calls "internal," and he means by this term that such relations are definitely *constitutive* of the being of eternal objects. Thus, every eternal object, in virtue of its relational essence, is linked with the whole realm of eternality, and cannot be abstracted from it. The realm of possibility, in other words, is an ordered system in which all the elements are bound together by inherent and mutual relatedness.

We can thus see why Whitehead speaks of the 'graded entry' of eternal objects into any actual occasion we are considering. If every eternal object on the side of its 'relational essence' is bound up with the entire realm of eternal objects, then, when any one eternal object ingresses into a particular occasion, in some sense the whole realm must be present. The whole realm of eternality is present in such an occasion in some degree, because of the general systematic relatedness which is inherent in the realm as a whole. This does not mean that every eternal object is fully and completely actualized in each occasion, but only that those relationships are realized that are 'relevant' to the particular occasion. The principle governing the realization of eternal objects is called 'the principle of degrees of relevance.' Some eternal objects in a given occasion will be realized in respect of their full essence, others will be realized in respect of some only of the relations that constitute their essence; whilst others may be entirely excluded. In the latter extreme case the determinant relations which constitute the relational essences of the excluded eternal objects may still be thought of as ingredient in the actual occasion, though in a *negative* way. They are ingredient in the occasion as 'unfulfilled alternatives.' They do not contribute to the aesthetic synthesis of the actual occasion, but they do form an element in the systematic substratum of unfulfilled content. The negative prehensions play a part in the general synthesis and contribute to the final emotional tone of the actual occasion. The determinate relations of excluded eternal objects are thus ingredient negatively as expressing 'how' these relations represent unfulfilled possibilities. They "might have been" realized but in fact in the given occasion are not. But like those excluded from the franchise of a country, they nevertheless, by their very exclusion, exercise an influence on government, even if only of restraint.

Eternal Objects Constitute a 'Realm'

The exposition just given is what is meant by the notion of "grades of entry" of eternal objects. The realm of eternal objects is an inter-related system, each eternal object enjoying its 'status' in virtue of its membership in the system. In consequence of this close relatedness of eternal objects, the whole realm is prehended either positively or negatively in every actual occasion. How an actual occasion in some sense includes the entire realm of eternality can perhaps best be grasped by using a simile. It is like the first streak of dawn which, though a definite event, needs for its being the glory of the whole sun. Or to vary the simile: It is like a striking passage in a poem which only has meaning in the full context, and apart from its setting is a mere sequence of sounds

Every occasion, then, prehends all eternal objects, either as 'being' or as 'non-being' as Plato would say. In this connection I quote the words of Whitehead himself:

"It is this realized extension of eternal relatedness beyond the mutual relatedness of the actual occasion, which prehends into each occasion the full sweep of eternal relatedness. I term this abrupt realization the 'graded envisagement' which each occasion prehends into its synthesis. This graded envisagement is how the actual includes what (in one sense) is *not being* as a positive factor in its achievement. It is the source of error, of truth, of art, of ethics and of religion. By it fact is confronted with alternatives."[1]

It is because the multiplicity of eternal objects form a system of mutual relatedness in which each is assigned its status, that they are to be thought of as constituting a 'realm.' It is the realm of possibility, an eternal order of being whose 'envisagement' by God (the ultimate principle of concretion or limitation), in accordance with the principle of relevance constitutes the primordial ground plan of the Universe. By this order provision is made for the proper ingression of all forms needed to provide definiteness to the totality of events which constitute Nature and its creative advance. In Whitehead's words it is a transcendent order governed by the principle of 'relevance for actualization,' and because it is an order of eternal relatedness, each actual entity in its synthesis enjoys a 'graded envisagement' of the entire realm, in some degree.

By the term 'possibility' is to be understood that the nature of eternal objects is to enter into relationships with actual occasions. Their being is to provide forms of definiteness to occasions and to give them a character. They always stand in readiness, as it were, to clothe the bare flux of creative activity with appropriate garments of form and quality, and thus to provide character to an otherwise characterless movement. It would seem then that the realm of possibility is the correlative of the realm of actuality. It is achievability abstracted from achievement. The total metaphysical situation is composed of both realms, and neither can be abstracted from the whole of which they are aspects.

Freedom and Determinancy

We have seen that the whole realm of possibility is in some degree synthesized in each occasion. But since some eternal objects are especially relevant to a given actual entity, it is important to understand what it is that constitutes the relationships of any eternal object to a specific occasion. Whitehead goes into this question, and his reply is as follows:

The eternal relationships of any given eternal object which we

[1] *Science and the Modern World*, p. 247.

may call A to an actual occasion O, is simply the 'how' the eternal relationships of A to *other* eternal objects are graded as to their total relationships in that occasion. Thus if we want to understand the relationship of any eternal object to a definite actual occasion, we must look to the relationships of this eternal object with other eternal objects involved in the given occasion. This answer follows from the fact that eternal objects comprise a realm of mutual relatedness. And since every occasion is also a synthesis of the whole realm of possibility according to the principle of degrees of relevance, it also follows that every actual occasion, so far as that specific occasion is concerned, is a conversion of modalities of possibilities into actual categorical ingressions. In other words, in any given occasion possibility has become actuality, so that predicates of truth and falsehood can now be made. Thus an actual occasion solves all indeterminateness, by converting possibility into actuality. It not only synthesizes in a novel unity all other *actual occasions* as elements in its physical nature, but it also prehends the eternal realm in its entirety according to the principle of degrees of relevance of value. But if all modalities of possibility are solved in any actual occasion, that is to say, if possibility has been converted into actuality, then we are able to see that eternal objects must be viewed under a double aspect. In regard to occasions *generally*, they have an indeterminate relationship. In this aspect they are potentialities for all occasions that may need their ingression. Here their relationship is quite general and in no sense specific. But in any *actual* occasion, a passage from possibility to actuality has been effected. The relationship of each eternal object to the actual occasion which synthesizes it, is therefore a determined one. Possibilities no longer hold: what we have now is definite achieved matter of fact. Eternal objects in their aspect of being patient or ready for ingression into occasions generally, may be said to be in 'external' relations to such occasions. But in a specific actual occasion in which a selection of eternal objects has been synthesized, the occasion and the eternal objects in question must be regarded as 'internally' related. Each eternal object is, therefore, free and unfettered in regard to occasions generally, but is determined in every occasion into which it ingresses.

It is important to understand the difference in the relationship of eternal objects to each other in the realm of possibility and the relationship subsisting between them when actualized in a given occasion. In the realm of possibility, the *individual* essences of eternal objects, e.g. shape, colour, and so on, are not in a state of "togetherness"; they live, as it were, their own independent lives and form no social ties.[1] But the case is different when they ingress

[1] This isolation of eternal objects in the realm of possibility is due to the fact that their relations to each other in this realm,—what has been called

into an actual occasion. Here they form the closest ties. They no longer 'dream' of entering into union, but definitely sign the marriage contract. But even in the marriage state of any given occasion they do not forfeit their individuality completely. Although there is a genuine "togetherness" of individual essences, it is a togetherness of only *some* of their possible relationships. The eternal objects in question retain intact many other possible relationships, which are in no way infringed by the actual social ties assumed. Nevertheless, in respect of some of their possible relationships, a real union of eternal objects is effected by an actual occasion, a genuine synthesis of essences, and this synthesis is the achievement of an emergent value. In this process of synthesis we can discriminate three aspects. In the first place there is the eternal relatedness or form (εἶδος) in respect to which the real togetherness is achieved. (The 'eternal' relatedness means that before the essences came together in actual fact, they were in this relation in 'idea' as mutually relevant.) In the second place there is the emergent actual occasion, which is a definite achievement of value, a real togetherness of the individual essences of eternal objects. Finally we discern the creative activity which prehends *valueless* possibility into a real synthesis of informed value. That is to say, a merely 'possible' togetherness of essences has been converted into an actual concretion. Concerning the nature of this general activity, Whitehead says:

"it is not an entity in the sense in which occasions or eternal objects are entities. *It is a general metaphysical character which underlies all occasions.* There is nothing with which to compare it. Its attributes are (1) its character of individualization into a multiplicity of modes and (2) the realm of eternal objects which are variously synthesized in these modes. Thus eternal possibility and modal differentiation into multiplicity are the attributes of the one substance."

I have endeavoured to make clear what Whitehead means by the realm of eternal objects. It is an order of entities complementary to the realm of actuality. I have also tried to show that the total metaphysical situation includes both realms. This realm of eternality consists of simple eternal objects and all grades of complex eternal

their 'relational' essence,—do not in any way effect their *individual* essences. In the realm of possibility the relational essences of eternal objects merely constitute a uniform scheme of relationships which is shared in common by all the eternal objects, so far as the status of each permits. Each eternal object stands internally in all its *possible* relationships, and by so doing constitutes a pervasive uniform scheme. Accordingly the relationships subsisting in the realm of possibility have nothing to do with the *individual* essence of eternal objects. They involve *any* eternal objects as *relata* only. "The eternal objects are isolated because their relationships as possibilities are expressible without reference to their respective individual essences." (*Science and the Modern World*, p. 230.)

objects. Examples of simple eternal objects are the specific shade of green of the grass on my lawn; the specific scent of the monthly roses growing on the same lawn; the shape of the leaves of the walnut tree in my drive, the unique plaintive note of the nightingale which sings nightly in his shady bush on the common beyond my garden. A 'simple' eternal object is one that cannot be analysed into a component of a complex eternal object. It is a specific colour, or sound, or shape, unassociated with other eternal objects. A complex eternal object, on the other hand, consists of a number of eternal objects associated in a relational structure, each distinct eternal object being a component of this structure. As an example of a complex eternal object, we may, I think, take a harmony of different musical notes. Here we have a plurality of specific sounds, each possessing its own unique quality, ordered in a certain way and implicated in a characteristic pattern. If we think of this pattern as some definite possible relatedness *anywhere at any time*, we are apprehending a complex eternal object. The number of possible combinations of eternal objects with each other are clearly very large, if not infinite. Shapes, colours, sounds, scents, tastes, modes of feeling, etc., can be associated in a vast variety of ways. Consequently we can readily envisage the realm of eternality as a hierarchy of eternal objects, having at the base 'simple' eternal objects and ascending therefrom to its apex in a series of ever increasing complexity.

Classification of Eternal Objects

There are two distinct classes of eternal objects, and it is important to understand the way in which they respectively function. One class is called the 'objective' class, and the other the 'subjective' class. The eternal objects belonging to the objective class can only function in one specific way. They can be elements only in the *definiteness* of some simple actual entity or in the definiteness of a nexus of actual entities which are 'data' for the process of subsequent self-creation. It will be remembered that in the article on "Actual entities or Actual occasions," it was explained that every actual entity on the achievement of its 'satisfaction' became a potential for a further creative process. As such it was the 'material' out of which a succeeding and novel actual entity could arise. In other words, it became a 'datum,' something given to a new 'subject' as material for its synthetic activity, constituents for its feeling. The 'objective' class of eternal objects are limited in their function to supplying forms of definiteness to such data. In so doing they are agents for introducing one completed actual entity or a nexus of completed actual entities into the real internal constitution of a novel actual entity. By a necessity of its nature an eternal object of the objective

class is an *agent of relation.* It links those actual occasions which have attained their ends with new occasions which are in the process of self-creation, by 'objectifying' the former for the latter. In other words, the eternal objects belonging to the objective species, invest the world with a certain definiteness, and present this world with just that definiteness as data for further creative action. "The solidarity of the world," says Whitehead, "rests upon the incurable objectivity of this species of eternal objects," and he identifies them with the mathematical platonic forms.

The 'subjective' class of eternal objects are not apparently limited to one function only, but may enjoy a twofold role. An eternal object of this species is said to be primarily the form of definiteness of a subjective feeling. It is a determinate way in which a feeling can feel. Now a feeling can, in the broad sense, be an emotion such as *fear,* or *anger;* it can also be an *intensity,* such as a mother's delight in the first response of her infant to her smile; it can be the peculiar experience of *attraction,* such as is felt towards a gracious personality, or *aversion* felt by a pure soul when he encounters evil. It can also be the *form of a pleasure,* for example, the specific feeling involved in the exercise of a young and healthy body; or it can be the form of a *pain,* such as a severe blow on the ankle; or that of *grief,* experienced at some irreparable loss. In these instances an eternal object is clearly seen to be functioning in the specific way of determining 'how' a feeling is felt. It eliminates vagueness and provides a definite character to the feeling of the subject.

But an eternal object of the subjective species, although primarily it is an element determining the subjective form, can also function as an agent *relating* an actual occasion to a succeeding novel self-creating occasion. That is to say, it can play a part in the objectification of an actual entity. I will try to show how it does this. Suppose an actual occasion "A" precedes an actual occasion "B," "A" being objectified for "B" as a datum to be prehended in its novel synthesis. We have already seen in an earlier article, that a novel entity such as "B" does not absorb into its constitution the *whole* of the data offered to it. It makes a selection, and chooses only that 'material' that is required. The rest is ignored, i.e. negatively prehended. This being the case, the novel occasion we are considering will prehend positively not the whole of the preceding occasion "A," but only a constituent of it. Let the constituent which objectifies the occasion "A" for "B," and which B prehends be *X.* Now when "B" prehends its datum "A" through this component *X,* it feels A with *that* feeling, and that feeling has of course a definite form due to an eternal object. This eternal object of the component *X* is then *both* a form in the definiteness of A's subjective feeling, and *also* a form in the definiteness of A as objectified for

B's prehension—i.e. as a datum for B. The same eternal object is thus functioning in a twofold way. In the first place it is an element in the subjective feeling of A; and in the second place it is the form of the datum presented to B. It thus functions not only subjectively but also *relationally*. A's subjective form of feeling is linked to B's feeling by the same eternal object. It is so linked because in the first stage of B's physical feeling there is conformation with the subjective form of A's feeling. Thus B, in Whitehead's language, "sympathizes" with A by means of the same eternal object playing a twofold rôle.

In some final remarks on the two classes of eternal objects, Whitehead seems to imply that the method of physical science in its analysis of Nature is unable to deal satisfactorily with the subjective species of eternal objects, though competent to handle the eternal objects of the objective species. The subjective forms of feeling are concerned with the *subject* aspect of an actual entity, and are only explicable from the point of view of the unity of the subject. Physical science, however, seems concerned not with the concrescent subject in the phases of its growth, but only with the achievement of the process, the 'satisfaction' or matter of fact. In other words, it is not concerned with the genesis of an actual entity which is a concrescent process involving a subject prehending and integrating data, and enjoying subjective forms of feeling, but only with the *completed* process when the subject has perished. Consequently the method of division of the actual entities of Nature adopted by physical science, "produces feelings where subjective forms are partially eliminated and partially inexplicable." . . . "In so far as the relationship of these feelings require an appeal to subjective forms for their explanation, the gap must be supplied by the introduction of arbitrary laws of Nature regulating the relations of intensities. Alternatively the subjective forms become arbitrary epiphenomenal facts, inoperative in physical nature, though claiming operative importance." (It is to be noted that what we call the 'intensity' of physical energy belongs to the subjective species of eternal objects, whilst the peculiar form of the flux of energy belongs to the objective species.)

Physical science in following the method of co-ordinate division, takes no account of the subjective aspect of an actual entity. It merely analyses its complexity in its function of efficient cause. It finds no place for final causation. But we saw in the previous article that an actual entity as a subject reaching out after an end, must be credited with final as well as efficient causation. Its teleology, however, cannot be discerned by co-ordinate division of the 'satisfaction,' for when the satisfaction has been attained the subject has perished. It can only be discerned in the "genetic" division of

the actual entity, the method which follows its concrescent growth from phase to phase, and which treats the entity as a 'process' rather than a static thing. When this method is followed we discern that not only efficient causation must be predicated of an actual occasion, but final causation as well.

Secondary Qualities

There is one further characteristic of eternal objects of the subjective species which it is desirable to note. As an agent in objectification an eternal object of the subjective species may come under the operation of what Whitehead calls the "Category of Transmutation," and by so doing become a characteristic of a nexus of actual occasions as objectified for a novel percipient occasion. We must, therefore, explain this important "Category of Transmutation" in Whitehead's Organic Philosophy.

In the first place the organic philosophy postulates that from each *physical* feeling (namely, that which a novel occasion has when it is prehending another actual entity or a nexus of actual entities) there is the derivation of a purely conceptual feeling. This conceptual feeling has as its datum or object the eternal object which is the form of definiteness of the actual entity or nexus of actual entities which the novel occasion is prehending. This means that the novel occasion has two types of feeling, (1) physical feeling arising from prehension of actual entities, (2) conceptual feeling arising from the prehension of the 'form' of actual entities. These two types of feeling undergo *integration* in the course of the development of the novel occasion towards its final satisfaction. This is called by Whitehead "conceptual valuation."

In the second place there is a further 'secondary' origination of conceptual feelings. In this second stage, the eternal objects which are the data of these conceptual feelings "are partially identical with, and partially diverse from, the eternal objects forming the data in the first phase of the mental pole." Whitehead explains that the diversity is due to the subjective aim of the novel occasion which has its own 'end' to attain, and which is determined by its own self-creation. Nevertheless, whatever diversity there is, is always a 'relevant diversity,' Whitehead calls the secondary origination of concepted feelings arising from the goal of the self-created subject "Concepted Reversion."

Now we are in a position to understand the important "Category of Transmutation" which Whitehead states as follows:

"When in accordance with 'conceptual valuation' or other 'conceptual Reversion' one and the same conceptual feeling is derived impartially by a prehending subject from its analogous, simple physical feelings of various

actual entities in its actual world, then, in a subsequent phase of integration of these simple physical feelings, together with the derivate conceptual feelings, the prehending subject may transmute the *datum* of this conceptual feeling into a characteristic of some *nexus* containing those prehended actual entities among its members, or of some part of that nexus. In this way the nexus (or its part), thus characterized is the objective datum of a feeling entertained by the prehending subject.

"It is evident that the complete datum of the transmuted feeling is a *contrast*, namely 'the nexus, as one, in contrast with the eternal object.' This type of contrast is one of the meanings of the notion 'qualification of physical substance by quality.' "

It appears clear from this "Category of Transmutation" that the Organic Philosophy teaches that what we call the primary and secondary qualities of things, such as shapes, sights, sounds, touches, tastes, etc., are the eternal objects or "forms of definiteness" implicated in an actual entity, or nexus of actual entities. These forms are as it were 'held apart' from the physical aspects of the actual entities by the subject, and are viewed by it in the form of a contrast. In our experience this contrast assumes the form of physical substances characterized by qualities, e.g. a 'grey' stone, 'green' grass.

With this preliminary explanation of the Category of Transmutation, we can return to the statement made on an earlier page, that the subjective species of eternal objects not only functioned relationally as well as determining the subjective forms of feeling, but sometimes become, by the operation of this category, a characteristic or 'quality' of a nexus of actual occasions.

I will give an example of this process from Whitehead's own writings. "Redness," he says, may in the first place be the definiteness of an emotion which is the subjective form in the experience of an actual entity A. Being an eternal object of the subjective species, it next becomes an agent whereby A is objectified for B, so that B feels A with *that* 'red' emotion. Further "A" may be only one member of a nexus of occasions all of which are closely analogous to "A." In this case, if they are all objectified for B's prehensions, they will all have a subjective form analogous to A, i.e. "red." Now in this case the whole nexus of occasions will be objectified for B's prehension not by *different* eternal objects, but by the *one* eternal object which characterized A and with which the other members of the nexus are analogous, namely "redness." The subjective forms of the *whole* nexus is objectified as "red," or in other words the nexus of occasions is objectified for B and *illustrated* by the characteristic "redness." This is due to the operation of the category of transmutation. It will be observed that this process involves the 'holding apart' of the group of occasions as such from their representative 'form' (in the example given "redness") in a

state of contrast, so that the form "redness" now appears as a quality of the nexus of occasions, just as "grey" qualifies the stone, or "green" the grass. Thus it is the Category of Transmutation that is responsible for predicates being asserted of things. This is the theory that in our sense experience of things, the qualities we perceive such things to possess, are "projected" by us on the objects.

A "quality," originally a subjective form of feeling, of an actual occasion, or nexus of actual occasions, is an eternal object, viewed in the first place as a *contrast* to the occasions as such, and in the second place, predicated as a quality or characteristic of the nexus.

It must be observed that when transmutation takes place, the nexus will not only be illustrated by such qualities as redness, which are subjective species of eternal objects, but also by mathematical forms, which are eternal objects of the objective species.

"Where" in the Universe are Eternal Objects?

Seeing that eternal objects are very important entities in the universe, is it a legitimate question to ask *where* they are? The answer is, certainly it is a perfectly legitimate question. This is made clear by Whitehead in his remarks on the "ontological principle" upon which the Philosophy of Organism is based. He explains this principle in these words:

> "Every condition to which the process of becoming conforms in any particular instance, has its reason *either* in the character of some actual entity in the actual world of that concrescence, *or* in the character of the subject which is in process of concrescence. This category of explanation is termed the 'ontological principle.' It could also be termed the 'principle of efficient and final causation.' This ontological principle means that actual entities are the only *reasons*, so that to search for a *reason* is to search for one or more actual entities. It follows that any condition to be satisfied by one actual entity in its process expresses a fact either about the 'real internal constitution' of some other actual entities, or about the 'subjective aim' conditioning that process."[1]

Put in simple language this principle may be said to affirm that every entity in the universe is felt by some actual entity and that everything is positively somewhere in actuality and in potency everywhere.

We have seen in an earlier part of this essay that the realm of eternal objects is to be regarded as equivalent to the general potentiality of the Universe. Now if the ontological principle postulates that everything must be somewhere, and "somewhere" means "some actual entity," the general potentiality of the universe (i.e. the realm of eternal objects) must be somewhere. It is somewhere since it retains its proximate relevance to actual entities for which it

[1] *Process and Reality*, p. 33.

is unrealized. Whitehead explains that this "proximate relevance" reappears in subsequent processes of concrescence in the form of final causation regulative of the emergence of novelty. What actual entity then is the "somewhere" of the general potentiality of the universe? Whitehead's reply to this question is that it is the non-temporal actual entity which he calls "the principle of concretion" or "the primordial nature of God." It is important to understand this notion of a non-temporal actual entity, and I will now give a description of Whitehead's line of thought on the subject.

In the Philosophy of Organism, the actualities constituting the process of the temporal world are conceived as exemplifying the ingression of eternal objects which constitute the potentialities of definiteness for any actual existence. That is to say "the things which are temporal arise by their participation in the things which are eternal." Whitehead proceeds to explain that these two sets of entities are *mediated* by a unique entity which combines the actuality of what is temporal with the timelessness of what is potential. This non-temporal actual entity is the primordial nature of God. The primordial nature of God is the principle of concretion in the Universe, "the principle whereby there is initiated a definite outcome from a situation otherwise riddled with ambiguity." The primordial nature of God is said to be the acquirement by Creativity of a primordial character. It must be thought of as "Conceptual" only, by which term it is meant that in the primordial nature of God there is an "ideal" realization of the realm of eternal objects according to the relevance of each for actualization in the concrescent processes constituting the actual world in time. The following passage from *Process and Reality*[1] is a weighty utterance on the notion:

> "Thus when we make a distinctionof reason, and consider God in the abstraction of a primordial actuality, we must ascribe to him neither fulness of feeling nor consciousness. He is the unconditional actuality of conceptual feeling at the base of things; so that by reason of this primordial actuality, there is an order in the relevance of eternal objects to the process of creation. His unity of conceptual operations is a free creative act, untrammelled by reference to any particular course of things. It is deflected neither by love, nor by hatred from what in fact comes to pass. The *particularities* of the actual world presuppose *it*; while *it* merely presupposes the general metaphysical character of creative advance, of which it is the primordial exemplification. The primordial nature of God is the acquirement by creativity of a primordial character."

This quotation enables us to understand Whitehead's assertion that this ideal realization of potentialities in a primordial actual entity constitutes the metaphysical stability of the universe. That is to say the primordial nature of God is the ground which enables the

[1] P. 486.

actual process to exemplify general principles of metaphysics and to attain the ends congruent to specific types of emergent order. By reason of the actuality of this primordial valuation of the realm of pure potentiality, each eternal object has a definite, effective relevance to each concrescent process. Were it not for this primordial valuation, there would be a complete disjunction of eternal objects unrealized in the temporal world, and novelty would be both meaningless and inconceivable.

God

It is desirable at this point to describe briefly the line of thought which leads Whitehead to postulate the "principle of concretion" or the "primordial nature of God" as the entity constituting the metaphysical stability of the universe. The argument runs as follows: In the first place each mode of the general activity ("Creativity") is limited so as not to be other modes. In the second place it is *an actual course* of events which might be otherwise so far as eternal possibility is concerned, but *is* that course.

"This limitation takes three forms, (i) the special logical relations to which all events must conform, (ii) the selection of relationships to which the events do conform, and (iii) the particularity which infects the course even within those general relationships of logic and causation. Here we discern the first limitation, namely that of antecedent selection. So far as the general metaphysical situation is concerned there might have been an indiscriminate modal pluralism apart from logical or other limitation. But there would not then have been the modes that there are, for each mode represents a synthesis of actualities which are limited to conform to a standard."[1]

These facts, says Whitehead, bring to light a second way of limitation. It reveals the truth that "restriction" is the price exacted for value. The argument then proceeds to its next phase. There cannot, it is said, be value without antecedent standards of value to enable the envisaging activity to discriminate between acceptance or rejection of what is before it. The two facts (1) that there is an actual course of occasions, and (2) that the occasions are the emergence of values, both require that the whole course of events should have developed under the direction of a principle composed of conditions and standards of value. This principle of limitation Whitehead calls God. He is the ground for limitation in the ultimate activity. Seeing that God, as thus conceived, is the ultimate principle of limitation, it follows that no ground can be given for that limitation which it stands in His nature to impose. Further we cannot give any reason for the nature of God, because His nature is itself the ground of rationality. Neither can we say that God is concrete, although He is the ground for concrete actuality.

[1] *Science and the Modern World*, chap. xi.

In *Science and the Modern World*, the concept of God was not developed beyond that of the principle of limitation. In *Process and Reality* we find an addition. In this work the principle of limitation is called "the primordial nature of God." But it is suggested that this concept may be enriched by an added notion which is called the "consequent" nature of God. The consequent nature is said to arise from the *reaction* of the world on His primordial nature. The primordial nature of God is not fully actual, since the actual is a synthesis of both physical and conceptual feelings, and God's primordial nature enjoys only conceptual feelings. But in His "consequent" nature God is said to be fully actual. What, then, is the consequent nature which endows God with the fullness of actuality? It is the weaving of physical feelings, derived from the temporal world, upon His primordial concepts. This integration of physical feeling derived from the temporal world, with His all-embracing conceptual feeling, derived from the realm of eternal objects, endows Him with full actuality and consciousness. The consequent nature of God is said to be the "objectification" of the world in God. "God then is to be conceived as originated by conceptual experience with his process of completion motivated by consequent physical experience initially derived from the temporal world." It is clear from this quotation that God's consequent nature is a growth, since the temporal world is itself a cumulative passage.

One further point needs to be emphasized in this account of God's nature. Whitehead's philosophy involves the view that although God and the World may be opposed in our thought, they cannot in reality be torn apart:

> "Thus each temporal occasion embodies God, and is embodied in God. In God's nature, permanence is primordial and flux is derivative from the world; in the World's nature, flux is primordial and permanence is derivative from God. Also the World's nature is a primordial datum for God; and God's nature is a primordial datum for the World. Creation achieves the reconciliation of permanence and flux when it has reached its final term which is everlastingness—the Apotheosis of the world . . . God is the infinite ground of all mentality, the unity of vision seeking physical multiplicity. The World is the multiplicity of finite actualities seeking a perfected unity. Neither God, nor the World, reaches static completion. Both are in the grip of the ultimate metaphysical ground, the creative advance into novelty. Either of them, God and the World, is the instrument of novelty for the other."[1]

This ends my account of Whitehead's thought on the nature of God and of His relation to the realm of eternal objects and the world of becoming. We have learnt that God's nature is bi-polar like every other actual entity. The envisagement of the realm of eternal objects constitutes His "conceptual" nature, whilst the feelings derived from the actual entities forming the temporal world of flux

[1] *Process and Reality*, p. 492.

constitutes His "physical" nature. On His "conceptual" side, God if infinite, free, complete, eternal, but deficient in actuality and unconscious: on His "consequent" side He is determined, incomplete, fully actual, conscious, and "everlasting."[1]

I have now dealt exhaustively with Whitehead's doctrine of eternal objects. It should be clear why the Organic Philosophy asserts that in order to understand the temporal and spatial world it is necessary to take account of the realm of eternality. It is this realm which provides what is permanent in the general flux of events. The universe is both a passage and something that is permanent. Its permanent features are the eternal forms which ingress into the flux of events and give them a definite and determinate character. Apart from them the world would be "without form and void." Hence the things that are temporal need for their being the things that are eternal, and a Metaphysic of the Universe must include as complementary facets both the realm of the actual and the realm of the ideal.

[1] This term means "the property of combining creative advance with the retention of mutual immediacy." See *Process and Reality*, p. 489.

DISCUSSIONS

SEEKING A WAY THROUGH OUR PRESENT PERPLEXITIES

In seeking principles that might guide us through the perplexities of our times I turned to the contrast, obvious and striking in our age, between the success of man's rational achievement in the field of purely scientific inquiry with his failure to find satisfactory solutions of many of his human problems. It occurred to me that if we were able to find the reason for this contrast, we might diminish our confusion and find guidance to principles that might enable us to live and work together as men.

What, then, are the conditions that have ensured the success of purely scientific inquiry? I shall only mention two which appear to me to be the most fundamental. The first is an entire *openness* of mind in the scientist's approach to all his problems. There is humility in his acceptance of the facts as presented, and absolute loyalty in his recognition of their implications. He faces his problems without preconceived conceptions as to the manner of their solutions, being prepared to modify the principles of interpretation if observation and analysis of the relevant facts so demand. Such *openness* in approach implies impartiality, for to achieve it the inquirer must, as far as possible, eliminate the personal influence of the reactions of feeling and will to the objects which he investigates. The second condition follows from the first. It is the preparedness to *universalize* all principles of interpretation. No interpretation can be accepted unless found applicable to all the relevant facts, however obstinate these may be; and it must further be found compatible with other accepted principles of interpretation which are essentially related to the inquiry. By fidelity to principles such as these the scientist has arrived at his present success. He has used his powers of reason to pursue principles that far transcend his personal interest and desire, and in seeking truth that is universal and pervasive of the physical universe as a whole, he has achieved success which would otherwise have been impossible.

But can these principles provide the guidance that might lead to greater success in the field of human action?

Before we can attempt to answer this question it is necessary that we should appreciate the difference between these two modes of human rational activity. As regards the first, the purpose of purely scientific inquiry is to know. The scientist regards the physical universe which he investigates as existence of which he is an impartial spectator. His aim is to find the most satisfactory explanations he can of the special fields which he investigates and to arrange these in what system is possible; his work, in so far as scientific, being purely cognitive. But the nature of the second mode differs radically from this. Here man is no spectator, but is a member of the universe in which he acts. No longer can he eliminate the influence of personal feeling and purpose. On the other hand, it is intensified feeling that moves him to action, and purpose that directs him to his goal. In the sphere of human action man's search is not merely for knowledge, but is for a way of life; and since no way can be found save in association with society, community, nation, or other

human group, it must be to find a way of acting with his fellow men. In the search for knowledge the inquirer regards the character of the world as fixed by forces entirely outside his control, but in this larger sphere man finds himself an actor who, by responding to influences that environ him, is contributing to change in his society and world and is thereby changing himself. In this sphere therefore man is concerned not only with the world as it exists, but also with the world as it may become, and especially with the manner in which he can contribute to the becoming. He is, in fact, engaged in a spiritual quest in which his entire powers as a rational person are actively engaged.

Now, it may appear that the differences between these two spheres of rational activity are so great that the conditions for success in the one sphere can find no analogy with conditions for success in the other. But is this the case? I think not. The two characters we found important in scientific inquiry were (1) *openness* in the inquirer's approach to his problems, and (2) preparedness to *universalize* the conclusions of his inquiry: but what characters in the sphere of human action may be regarded as analogous to these? We saw that *openness* implied absence of preconceived conceptions as to the results of any inquiry and humble acceptance of the relevant facts. Now it seems to me human reason demands that similar *openness* in approach should be observed when facing problems arising from the effects of purposive action. That this is frequently not the case is evident from the reliance which is placed upon power in solving problems arising from the relations between human groups, and from the sting which is implied in the use of the term "privileged." Power is used to enforce purposes emerging from a closed mind which cannot be supported by reason, and privilege suggests a claim to the enjoyment of modes of human activity and well-being which cannot be extended to a majority of our fellow men. It is assumed that privilege implies power—a power that is likely to be misused. But, in the larger sphere, what are the facts which must be humbly accepted? They include of course the total situation in which any purposive action must take place, as well as the effects which are likely to flow from the action. At the same time the condition which differentiates them so vitally from the relevant facts for the scientific inquirer is the necessary relation of other persons to the action. No human purpose can be fulfilled save in co-operation with some other person or group of persons, and its effects are likely to influence persons outside any such group. Thus the demand of Reason for purposive action is that the presence of these other affected persons should be humbly accepted and recognized. They also must be treated as rational beings, that is, as ends-in-themselves, and not merely as means to the fulfilment of our purposes. Such recognition of persons as *ends*, however, is only the first part of this condition. Human problems are very difficult and complex, and there is frequently room for disagreement as to whether the pursuance of a particular policy is compatible with recognition of the dignity of other persons, or groups of persons, affected; or whether the effects of such policy will contribute to their welfare. In all such cases the rational demand is that these problems should be approached, as in the field of scientific inquiry, without fixed preconceptions in regard to their proper solutions; and that the proposed solutions and their probable effects should be submitted to impartial, competent, and expert examination, with a view to finding solutions acceptable to the parties concerned. Obviously the one type of solution which Reason entirely precludes, is that which cannot be supported by impartial inquiry but which some dominant group seeks to impose by force.

When we consider the operation of the second test of *universality* within the realm of purposive action, we find there is no difficulty so long as man's

purposes are directed to the enjoyment of values that are in themselves universal. So long, for instance, as man is seeking for beauty, or goodness, or truth, he is following that which will enrich himself and will, at the same time, enrich all those who come within the sphere of his influence. These values find expression in our great literatures and arts, as well as in the lives of innumerable men and women, and it is by these that we as men live. But what of the purposes that emerge from our bodily needs, and must be gratified by our limited material resources? How can these be universalized? If one person or group obtains more of the material goods available, must not the others obtain less? Yes, but there are two ways of satisfying such purposes. A person, or group of persons, may seek to obtain a maximum share of the goods available, leaving a minimum for distribution among the others concerned. Or, on the other hand, he or they may seek an equitable distribution of the available goods, so that all persons concerned may, each according to his need, participate equally in the ensuing enjoyment. It is clear that in so far as the latter course is followed personal desire is universalized, for it is gratified in a manner which contributes to the making possible of similar gratification by others. Personal desire is then raised to the level of moral endeavour.

But if we are prepared to accept guidance for our purposive action from rational principles comparable to those that control scientific inquiry, have we any right to expect in this sphere of activity results that are comparable? To answer this question we must ascertain what results could be considered comparable. By strict adherence to his method, the scientist seeks to eliminate contradiction from his interpretations and to give these coherence and system, and in so far as he is successful he finds that he is able to organize and control the classes of objects and events that he selects for his inquiry. Now we found that, in the sphere of purposive action, the other persons concerned constitute a major part of the conditions that have to be recognized, and further that interest is directed not to objects and events which now exist but to future states of affairs which purposive action anticipates. We are concerned, that is, with creative processes which are bringing new states of affairs into being, and there are no ends we can accomplish save in association with some or other of our fellow men. Now it seems to me that "conflict" is the character of this dynamic process which corresponds to "contradiction" in scientific interpretation. Obviously conflict ensues whenever any person claims the right to pursue his particular purpose in a manner which excludes recognition that other persons affected possess similar rights. This being the case, it is clear that he cannot win their willing co-operation but can only compel co-operation by force. By acceptance, however, of the fundamental rational demands indicated there is the possibility of progressing towards the elimination of conflict and of achieving harmonious and willing co-operation between groups of persons for ends that are generally approved. And it appears that there is no other way.

Now it may seem that the principles I have been endeavouring to indicate are purely formal, and therefore of little use when facing the great problems with which we are confronted. I will therefore give two illustrations of their operation in practice in the hope that these will show something of their importance.

First, at the present time we are experiencing the consequences of the most striking example in history of a *closed* conception of government. The policy of the Nazis is determined entirely by their *closed* concepton of the nature, functions, and destiny of the German State. This conception, like all such, is limited by racial, historical, geographical, and economic conditions, and in

addition by the heritage of humiliation and hate consequent on the Great War; nevertheless, as a fixed conception it is allowed ruthlessly to determine both the entire internal organization of the Nazi State, and all their relations with other States. Obviously any such closed conception can't be universalized. Its most formidable foe must be all the more universal conceptions of human society wherever these may be encountered. Hence the intensity of Adolf Hitler's antagonism to fundamental Christian loyalties, to the international Jewish outlook, to every form of liberal education, to international co-operation and collective security, to freedom of speech and of the press, and to the basic principles of democracy. All these entail loyalty to conceptions of human relations which far transcend any purely national state, and consequently must be regarded, by any leader who approaches his problems with a conception and purpose rigidly *closed*, as influences that are necessarily hostile and disintegrating. But the Nazi system illustrates not only the character of a *closed* conception, it also demonstrates beyond doubt the inevitable consequences. The operation of any such conception of government must lead, first, to opposition and conflict from other national groups; and, secondly, to frustration for those within who yield submission to its authority. The closed nature of the purpose entails the regarding of all outside human groups as of value, not in themselves, but only in so far as they may contribute to the furtherance of this closed purpose. There must therefore be opposition, whether active or suppressed, from any group that is striving for its own self-expression. But while this is the case, the more disastrous consequence is reserved for its own members. By cutting them off from all functions of the human spirit that reach after the universal in the various fields of human experience and activity, their leaders are depriving them of all the enriching and enlarging influences which nourish mental and spiritual growth, and thus contribute to their satisfaction as rational beings. Impoverishment of mind and spirit is inevitable, and eventually a sense of frustration must arise.

The second illustration applies more directly to the society in which we live—for Reason is no respecter of persons. This example comes from the accepted economic structure of our own social order and of that of other great democratic nations. In the struggle for human liberties under our own liberal institutions "profit-making" has been accepted as a legitimate, and the most effective, motive of economic enterprise. It has been generally assumed that profit-making is the only motive capable of stimulating maximum productive effort, and that competition will stabilize prices at an economic level and consequently ultimately lead to equitable distribution. Thus under this assumption public welfare was a secondary—although a necessary—result of purely economic forces, for which profit-making was the primary motive. The history of industrial development during the past century has shown the inevitable consequences of these assumptions. With the application of scientific methods and the mechanization of industry, centralization of control has become inevitable. Great industrial combines have grown up, with control in the hands of a few and wide distribution of ownership among shareholders. Within this new economic order profit-making is still regarded as the legitimate motive for enterprise. It is assumed that the assurance of satisfactory profits is the only reward that will attract the necessary capital and ensure the efficient operation and expansion of large-scale industry. Thus arises the inevitable conflict of interests between the controllers and owners of industry and their employees; so far, that is, as these purely economic principles operate. In view of their obligations to shareholders and the need for attracting capital, the controllers of industry must be concerned primarily for profit-making; whereas employees, on the other hand, must be concerned

for their rates of pay and conditions of labour. It is clear also that these interests may frequently conflict, and may lead to attempted solutions by trial of strength. Further, fairly widespread unemployment is inevitable, for whenever employees can't be profitably employed they must, under the system, be dismissed.

The cause of this seems to us obvious, for profit-making is not a purpose that can be universalized. The one motive can't apply to all the groups of persons essential to large-scale industrial and commercial enterprise; for the controllers and owners of industry by making it their end are compelled, in this regard, to treat employees merely as means to be used only so far as profitable for the achievement of their purpose. Nor is there any solution of this dilemma on the assumption of profit-making as the legitimate end for economic activity. On the other hand, as soon as we substitute an end which can be universalized, such for instance as "public welfare," a solution becomes possible. Such an end can be accepted by all the groups of persons essential to any large-scale enterprise, and harmonious co-operation in a common productive effort becomes possible.

It may be held that these are mere ideals which would not work in practice, and that we must face the facts. But fortunately we have in our own country, by the transformation of industrial methods for war-time production, made partial approach to the ideal. In facing a crisis in which our civil, political, and human liberties are in peril, Government and People have become convinced that the great ends for which the British Commonwealth of Nations is striving are so vital for themselves and for the preservation of human liberties throughout the world, that Government are right in demanding and the People right in conceding the sacrifice of all lesser group and personal interests, in order that these great universal ends may, if possible, be safeguarded. Directors and owners of large-scale industry and finance have been ready to return to Government a considerable portion of their surplus profits, and employees have surrendered what were hitherto regarded as their legitimate rights; and the long-standing conflict between these essential industrial groups has been largely suspended, and their relations transformed by the concerted effort to achieve ends that are worthy and of value to all mankind. And with what result? Certainly not that formerly anticipated by our economists. According to the public statements that are made this concerted and intensive effort has led to a doubling of the productive output. It seems to me indeed that the result has been so striking as to give the lie for all time to the economic fallacy that individual, or group, profit-making is the only motive capable of stimulating maximum productive effort. On the contrary, it has been demonstrated beyond doubt that co-operative effort directed to an end of universal value is a much more powerful stimulus; and further that this new purpose, because of its universality, points the way to a possible solution of the otherwise insoluble conflict of interests between controllers and owners and the many whom they employ. It is no longer necessary that the latter should be regarded as *means*; they are rather co-workers who are essential for the safeguarding of ends which all regard as beyond price.

Throughout this argument we have been insisting on the importance of accepting a few fundamental rational principles and on the operation of these in the realm of human action. We have pointed out that, by submitting personal interest and purpose to control by reason we raise personal purposive action and the corporate action of communities or other groups to the level of moral endeavour. It would be easy to show that preparedness to submit personal or group ends to examination by reason implies the acceptance of fundamental moral principles such as justice, unselfishness, and the like.

Indeed it goes further and demands expansion of the imagination and sympathies, so that appreciation of the persons associated with us in the fulfilment of our purposes, and of those affected by them, becomes possible.

But why start with moral principles? Why not go beyond these to the spiritual ground from which they spring? In attempting to answer this question it is well to bear in mind the nature of our problem. It is to discover principles for directing human activities, whether of persons, of communities or groups, or of nations. Such principles must therefore be acceptable by different racial, national, or religious groups, for apart from this, international co-operation is not possible. We found that in science a method for discovering such generally acceptable principles had been found, and we wished to explore the possibility of finding such principles for our guidance in the larger realm of human action, for principles that are not generally acceptable will not serve our purpose. But why not go to religion for these principles?

To me the answer seems clear. When we review the great religions of the world we find that, despite their differences, they make similar claims for the absolute authority of their founders and for the revelations embodied in their scriptures. It is assumed by each that it has discovered for all time the way to emancipation and life, and the ways to which they point are not always the same. Thus in the various great religions there is something of the *closed* approach towards deep human problems, and when they come face to face with their differences they are inclined to admit one way only as leading towards reconciliation and unity. It is the way of conversion, by which the one group abandons error and accepts the convictions and beliefs of the other. It may be that a much larger measure of spiritual truth has been revealed through some of the great religious vehicles than through others, but what is important is the fact that when we are searching for a basis of unity between communities possessing different religions or between communities which still possess deep religious conviction and others in which it has been weakened, assuming that they have reached similar levels of cultural development, no ground of union can be found so long as any of the groups concerned claim exclusive possession of the truth; for the other groups affected will regard this as an affront to their humanity—a lack of respect to them as persons. At the same time so long as the appeal is to reason, and is an invitation to the various groups to participate as equals in a search for applications of fundamental principles acceptable to all, there is some hope of finding agreement.

But further, may this not prove a fruitful approach to our spiritual problems, since it relates these vitally to our ordinary human activities and may assist in purging spiritual conceptions from what is irrelevant? It seems also that we may be following in the line of those who, throughout the ages, have sought the things of the spirit; for have they not approached these by way of their wonder at the great forces operating in the natural world, and at the manner and mystery of their working in the mind of man? May it not be that, wherever we penetrate to that which is universal, whether in the structural plan of the physical world as discovered by the scientist or in principles that may guide concerted action contributing to human welfare, we are increasing our knowledge of the being of God?

In addition, the rationalizing of purpose in the field of human action is essentially a spiritual activity. It brings into operation all man's powers, demanding clear apprehension, the intensification of feeling and the enlargement of the imagination and sympathies, and the expansion of purpose until it is acceptable to those who must co-operate for its fulfilment as well as to those who will be influenced by its effects. Surely it is by such exercise

that man's life is developed and enriched, and that the relations between men and nations may become increasingly helpful.

Is it then possible to persuade men to accept guidance from principles such as these? The crucial difficulty arises from the fact that to rouse men to corporate and collective action it is necessary to intensify the implicated feeling, and there is widespread conviction that this can be done most powerfully and effectively by appeal to some form of self-interest. Experience shows also that such conviction is not without ground; and, this being the case, can we hope for success when the appeal is to principles that are universal?

Let us then for the present assume that self-interest or some group-interest is the most powerful motive for human action. Despite this, it seems that there is still one condition under which an appeal to reason would be successful. If it can be shown that for man the ends of self-interest or of his group-interest can only be adequately achieved when guidance by universal principles is accepted, we may then hope that he will pursue his satisfaction in the better way.

Recently Norman Angell, in his volume *For What do we Fight?*, has supplied us with an important illustration of the truth of this condition. He points out that Defence and Security are and must remain the fundamental political motives of all Sovereign States. Further, he shows that our Political Leaders, in the years between the two great wars, fearing lest Britain's security and vital interests would be imperilled by accepting *definite* commitments under a system of collective security, refused to recognize as binding obligations that might lead Britain into war. They held that by accepting such obligations they would be transferring the right to decide "War or Peace" from the British Commonwealth of Nations to an External Authority.[1] Nevertheless, by the hard discipline of experience, they did eventually learn that the security of the British Commonwealth and of the principles for which it stands can only be assured by accepting guidance from and responsibility under the more general and universal principles for collective action embodied in the Covenant. Thus Lord Halifax, speaking for the Cabinet at the time of giving the British pledge to Poland, declared: "We are prepared to assist those countries which feel their independence immediately threatened and we are ready to defend their freedom . . . *by failing to uphold the liberties of others, we run the great risk of betraying the principle of liberty itself and with it our own freedom and independence.*"

So also is it with us as persons. As men I suppose we all seek the growth and enrichment of our personal experience. I have suggested that the *closed* purpose and outlook of the Nazis must lead to eventual frustration for their people since it cuts them off from the universal springs of life for man. Such consequence is inevitable whenever men accept purposes implying rights which can't be extended to their fellow men, and I have often thought that whatever advantage controllers of human labour may obtain by regarding for certain purposes vast numbers of their fellow men as *means*, they inevitably close and bar the door against one gain of inestimable value; for, by so regarding them, they inevitably contract their imagination and sympathies, and these, if expanded, might enable employers to achieve human relationship with those who serve them, and the enriching of experience which co-operation and human fellowship ensure.

Once, then, man becomes convinced of the truth of this law for his fulfilment, for it is a law based deep in the roots of our common humanity, he may

[1] Not perceiving that a universal rational principle, once accepted, is not an External Authority.

be convinced that it is well for him to accept such guidance as this wider exercise of his Reason can give.

GEO. H. LANGLEY.

THE PHILOSOPHICAL STATUS OF PHYSICS

I SHOULD be glad of an opportunity to discuss some points connected with Professor Milne's interesting article on "The Philosophical Status of Physics." I should not venture to do this but that his remarkable and (I believe) important cosmological theory does not seem to have been given the careful discussion it deserves. More competent critics than myself have evaded or bungled the task. A few years ago *Nature* published an attack on his theories and a number of comments by distinguished men of science. But the attack and the comments were so irrelevant that no light was thrown on the subject. Professor Milne cannot have derived much satisfaction from scoring off such feeble opposition.

The best way to state what I believe to be the nature and method of any such theory is by way of parallel cases of a simpler type. Archimedes in his work on the *Equilibrium of Planes* and on *Floating Bodies* develops by a pure deductive method a subject that most modern writers would consider to be founded on experiment. He sets out an apparatus of postulates from which he deduces theorems. Some of the postulates are empirical in the sense that they are contingent, that is to say, statements of what we find to be the case, but which might be otherwise. They are not necessary or *a priori* principles because they can be denied without self-contradiction. The theorems are of course also empirical, in the same sense. Thus the first postulate of the *Equilibrium of Planes* (p. 189, *Works of Archimedes*, trans. Sir Thomas Heath, 1897) is—"Equal weights at equal distances are in equilibrium and equal weights at unequal distances are not in equilibrium but incline towards the weight which is at the greater distance." The *Floating Bodies* (p. 253) has one postulate only—"Let it be supposed that a fluid is of such a character that, its parts lying evenly and being continuous, that part which is thrust the less is driven along by that which is thrust the more; and that each of its parts is thrust by the fluid which is above it in a perpendicular direction if the fluid be sunk in anything and compressed by anything else." From this is deduced the remarkable Prop. 2 (p. 254)—"The surface of any fluid at rest is the surface of a sphere whose centre is the same as that of the earth."

In his exposition Archimedes does not trouble to distinguish between empirical and *a priori* propositions, as he has no immediate need; all are equally grist to the deductive mill. But it is pretty clear (see *The Method of Archimedes* by Sir Thomas Heath, 1912), that he was aware of the difference. The advantages of developing an empirical science by the deductive method are obvious; it unifies, clarifies, and systematizes, as nothing else can. It may even show which are genuine first principles, which are secondary or derivative propositions. That is to say, if the system is reversible, so that we can either start with A, B, C as postulates and deduce from them theorems X, Y, Z, or else start from X, Y, Z, and deduce A, B, C, then there are no principles which are really first and the choice of starting point is arbitrary. On the other hand, the system may be irreversible, so that A, B, C are found to be the most fertile deductively and X, Y, Z less fertile and therefore derivative. The deductive method reduces the number of independent empirical proposi-

tions or independent contingencies, but it does not turn empirical propositions into *a priori* ones.

In his *Sand Reckoner* (p. 221), Archimedes pursues another method. This is an exercise in pure arithmetic, so far as there is such a subject, designed to show that a notation can be produced to express any number however large. The argument is that *if* the diameter of a grain of sand is so and so, and *if* the diameter of the stellar sphere is such and such, *then* the number of grains required to fill it is as stated. But this is not really the method of the works on statics. In any case a hypothetical system cannot be applied to anything without an empirical proposition as additional premiss.

Euclid in the First Book of the *Elements* was, I believe, doing much the same as Archimedes in his statics, though he may not have known it; and many wise men, including Descartes, Leibniz, and Kant, have not known it. The theorem, that the square on the hypotenuse of a right-angled triangle equals the sum of the squares on the other sides, they thought to be a necessary *a priori* truth deduced from equally *a priori* truths. They considered that none of the axioms, postulates, or theorems could be denied without contradiction. I shall venture to call *Euclid*, I, 47 an empirical proposition. If there is an empirical proposition among the theorems, there must be at least one among the axioms or postulates. There are several in Euclid, but not stated as explicitly as they might be. Euclid assumes (1) that light rays in air have a unique property in virtue of which we can discover by inspection which things are straight and which are not; as the carpenter does when he holds a length of wood endwise to his eye and looks along it. That seems to be the meaning of his cryptic definition of a straight line, which really ought to be among the postulates. He assumes (2) that there are rigid bodies by the help of which we can discover whether lengths and angles are equal or not; also (3) that space has a special property which can be described in various ways, one of them the famous postulate of parallels. Granted these things (and perhaps some others) *Euclid* I, 47 can be proved, otherwise not. If different postulates are granted different theorems can be proved, some of them incompatible with I, 47. We find by measurement of the relatively small triangular and square bodies we can deal with conveniently that the facts are as stated by Euclid to within the margin of error of the measurements. But measurements of really large triangles might show small deviations. When making the measurements we must be careful to avoid (if possible) assuming all these three properties of light, of rigid bodies, of parallels, otherwise we are already presupposing *Euclid* I, 47 and our measurements are only a clumsy way of arguing in a circle.

In developing his kinematic system Professor Milne deduces a theorem which corresponds to the law of gravitation. As far as I can see this law still remains empirical or contingent. There is no self-contradiction in supposing all bodies to repel one another, to be indifferent, or to attract one another universely as the fourth power of the distance. Professor Milne's argument shows that if I deny the law of gravitation I must also deny something else which he has among his postulates, which I had not hitherto supposed to be connected with gravitation. But I suspect that there is one among his postulates which I could deny without self-contradiction. I suspect further that it has to do with time measurements.

Apparently Professor Milne asks us to assume that time measurement is primary and does not presuppose measurement of length and the doctrine of rigidity. This seems to me a difficulty. I believe we have a sort of direct intuition of equality of time intervals, but one that is very vague and rough. Therefore any system of time units can be accepted which does not flagrantly

violate it. Thus in the latitude of Alexandria people used to take the intervals between sunrise and sunset as being all equal. In the latitude of Aberdeen this notion is rejected with scorn and in deference to such opposition has been abandoned. Naïve experience raises no objection to taking the intervals betwen successive noondays as equal, but also raises no objection to introducing small corrections. If time-keeping is to be accurate something has to be found or constructed which can be supposed to move uniformly or with uniform rhythm. This could be selected arbitrarily (there is an arbitrary element in the selection of any standard of measurement), but if two independent standards are found to agree then things are not so arbitrary. Thus (1) the apparent rotation of the fixed stars and (2) the pendulum give results which tally closely, though in practice (2) is corrected by (1). However (1) itself is supposed to need a small correction on theoretical grounds—the assumed retardation of the earth's rotation by tidal friction. There is still (3), the solar year, to fall back upon. Of course (1), (2), and (3) are all equally dependent on gravitation and Newtonian mechanics. All this is very obvious and elementary; the point is simply that accurate time-keeping has been developed by using machinery, celestial and human, and making a set of careful comparisons. To observe the positions of the stars and use pendulum clocks we need first of all rigid bodies and standards of length.

Finally, if Professor Milne is in the same boat with Archimedes and Euclid (very respectable shipmates) there is nothing to quarrel about, quite the contrary. If he is not content to remain there, the question to be answered is—How does he propose to leave? A. D. Ritchie.

Professor Milne's Reply

If I venture to reply to my old friend Professor Ritchie's kindly criticism, I do so in no controversial spirit. Let me go straight to the root of the matter. Professor Ritchie suspects that I am in the same boat with Archimedes and Euclid, and asks me, if I am not content to remain there, how I propose to leave. My answer is that Archimedes and Euclid are not in the same boat, and that mine is a different boat again.

On Professor Ritchie's showing, Archimedes assumes a certain *physical* principle—not an *a priori* principle, but a contingent one, which might have been otherwise—and makes a series of deductions from it. They are surprising and powerful deductions, and in that he showed his profound skill in his choice of a starting-point. This is the classical method of *physical* deduction: Archimedes is in the same boat as Newton, Carnot, Clausius, Planck, Bohr —very good company, as Professor Ritchie would say.

But Euclid is in a totally different kind of boat. We must first of all distinguish between Euclid's programme and his imperfect execution of that programme. It would be pointless, for example, to say that *analysis* is not a rigorous deductive part of mathematics just because Euler was not rigorous in all his proofs. For analytical vigour we go to modern analysts like Weierstrass or Hardy. The technique of rigour has improved since Euler's day. Similarly the technique of axiomatic geometry has improved since Euclid's day. Let me take Professor Ritchie's three examples of empirical assumptions supposed to have been made by Euclid, in the order (1), (3), (2). Assumption (1), which Professor Ritchie says might well be a postulate, but which Euclid supposes to be the definition of a straight line, is said to involve an empirical process for detecting whether an "edge" is "straight" or not; a property of light-rays is said to be assumed. But in no part of any derivation does Euclid categorically appeal to this definition, any more than he ever appeals to his

definition of a point as being without parts or magnitude. These definitions might just as well never have been introduced; Euclid was the victim of his own passion for tidiness. The properties of points and straight lines which Euclid actually used were properties of incidence, etc., which have been isolated by modern geometers. Modern geometers do not in fact mean by a straight line what Euclid thought he meant, nor is a "point" to be visualized as a dot. A "point" and a "line" are *things* which are just conveniently so named and which occur as nouns in certain propositions, such as "Two points determine a straight-line." These propositions are called axioms, and are essentially concealed definitions. They serve to make clear what the geometer is talking about—just and no more. That a "straight-line" can be illustrated by a carpenter's straight-edge, and a point by a dot, are interesting and useful statements, but are irrelevant to geometry. For the same "straight-line," introduced by the same defining axioms, may be illustrated in totally different ways—for example, in two-dimensional spherical (Riemannian) geometry by great circles on a Euclidean sphere. To a considerable extent, these possess exactly the same logical relationships in the theorems containing them as they do in two-dimensional Euclidean geometry: they are units in a scheme of relations, a scheme which for the geometer is perfectly empty, but which can be illustrated or *realized* in various ways. Straight lines in Lobatchewskian geometry can be illustrated by lines on yet another Euclidean two-dimensional surface. In each case the theorems—the laws—hold good independently of the mode of realizing the objects occurring in the defining axioms. No physical principle is involved whatever. Now why are there more than one "plane" geometry—Riemannian, Euclidean, and Lobatchewskian? Because—and this brings me to Professor Ritchie's (3)—until we introduce the famous axiom of parallels, or something to take its place, we have not completed the definition of the plane. We have not said what we are talking about—just and no more. We are dealing, it is true, with a two-spread of constant curvature, but we still have certain options open—logical options, that is. To make the two-spread a Euclidean plane, we have to introduce the parallel "postulate." If we replace this by a different "postulate" the two-spread becomes Riemannian, perhaps, and can be illustrated by the surface of a sphere. Until we have said exactly which kind of two-spread we are talking about, we find difficulty in arriving deductively at suspected theorems; when we have so said, different kinds of theorem emerge. But there is no sort of "physical assumption" involved; both kinds of theorems are equally "true." Nor is there any question of the "truth" of the axioms; one cannot ask whether a definition is true. We can no more test the axiom of parallels by measurement than we can by deduction. If indeed we find that large triangles in a certain two-spread have their angles not adding up to two right-angles, we can either use two-dimensional non-Euclidean geometry or deduce outright that the two-spread was some surface in a Euclidean three-spread. We should then look for this additional dimension, and there is no reason why we should not find it; a little intelligence on the part of those misguided inhabitants of "Flatland" would soon have removed their difficulties. In the same way, if large-scale triangulation in three dimensions disclosed discrepancies with Euclidean geometry, then the metrology employed would not be that corresponding to Euclid, and either we could use non-Euclidean geometry or we could continue to use Euclidean geometry and introduce one or more new dimensions, of which our measurements would be evidence. But Euclidean planes would still have the properties Euclid assigned them.

I now come to Professor Ritchie's (2)—the existence of ideal rigid bodies

assumed in the axioms of congruence. I agree with Professor Ritchie that Euclid, and with him all metrical geometers, if they are to make progress, find it necessary to introduce axioms of congruence. This is an example of the imperfect execution of their programme. No one likes the axioms of congruence, but people are driven to use them. Why? Because they have not succeeded in saying exactly what they are talking about when they mention *length*. How is this? The answer brings me to another of Professor Ritchie's questions—why do I put time measurements before length measurements? Because to measure a length you have to say what you mean by *two points at the same time*, and thus need a definition of distance-simultaneity, whilst to measure a time you need only to say what you mean by *two times* (events) *at the same place*, namely, one's self. And when you have achieved an operational definition of simultaneity at a distance, i.e. of what is meant by saying that a distant event is simultaneous with an event at one's self, one has already collected enough data to assign a measure of "distance-away" to that event, without having had to introduce an ideal rigid length-measurer. A single to-and-fro signal is alone required; call its light-signal if you wish, but no properties of light are appealed to in the setting up of the measures of epoch and distance. Thus our kinematical analysis, involving the passage of time *at the observer* as a fundamental element, contains just the "something new" (not present in geometry), which allows it to go one better and dispense with the indefinable concept of the rigid body, which clogs all geometries. Geometry is impotent to say what exactly a rigid body is meant to mean, just because it is a timeless system; introduce the passage of time for each observer, and with sufficiently detailed analysis one finds the need for the rigid body to disappear. Since geometers do not define the rigid body, the supposed appeal to properties of rigid bodies is a bogus appeal. It is not in the least akin to Archimedes' appeal to an experimental principle. Thus Archimedean physics is in one boat, geometry in another, and kinematics in yet another.

Professor Ritchie rightly points out that the scale of time is arbitrary. This is fundamental also in the analysis which Dr. Whitrow and I have made of the synchronization of "clocks." In our technical papers we have shown how, of two observers, each with an arbitrarily running clock, one of them can, by operations that can be carried out, dictate to the other instructions as to re-graduation which will make the other's clock a copy of the first observer's clock; that is to say, they can set up "congruent clocks," whatever their "relative motion," this phrase being understood solely in terms of observations they can make on one another using their respective clocks. We then ascertain the conditions under which, if B's clock is made congruent to A's, and C's clock congruent to A's, C's clock is also congruent to B's. This condition sets a restriction on the permissible relative motion of C with respect to A and B, given that of B with respect to A, and the totality of C-clocks congruent to A's and B's isolates types of relative motion. By picking out the type called "uniform," we isolate that mode of clock-graduation which converts all the relative motions of congruent clocks into uniform ones; this mode of graduation we can call "uniform time," and we can compare it with the physicists' time, based on recurrent phenomena, by deducing the dynamics which it implies. At every stage of our argument we are careful to say exactly what our symbols stand for, and rigorously to avoid "intuitive" or empirical appeals. We use no contingent propositions.

Professor Ritchie tackles me on the subject of the law of gravitation, and says that there is no contradiction in supposing all bodies to repel one another, or to be indifferent, or to attract with an inverse fourth power. But this

apparent lack of contradiction is because the law of gravitation is rather deep—our intuitions as to self-contradictions are too weak to see down into the matter. There is no *apparent* contradiction in denying Pascal's hexagon theorem—until we have proved it! But indeed there would be very great self-contradiction if particles failed to attract one another according to the law of the inverse square; such particles could not be the subjects of any of my very general defining axioms. To the geometer, "particles" are just "points"; but to the student of kinematics, particles in motion may move only in such-and-such ways, and the theorems or laws in obedience to which they move we call the law of gravitation. It was a tremendous surprise to me when I first found truly gravitational laws coming out of purely kinematic analysis. One has in fact to work in this medium before one can understand how different is its texture from the texture of the usual types of "physical" argument. That is why physicists find such great difficulty in assenting to it. It shows that there is nothing of what a physicist would call "physical" about the law of gravitation. The "constant" of gravitation, for example, is the positive number $\gamma = c^3t/M_0$, where c is the arbitrary number assigned to what appears as the speed of light, t is the age of the universe on the kinematic scale, i.e. our present epoch measured from the natural zero of time, and M_0 is the apparent mass of the universe. These three fix the units in which γ is measured; on the logarithmic scale of time, γ reduces to a constant $\gamma_0 = c^3t_0/M_0$, where t_0 is the constant (missing from Newtonian mechanics), whose absence made the *a priori* deduction of Newtonian mechanics formerly impossible.

One last word. I must make Professor Ritchie a present of one of his points. He suspects that since I deduce the law of gravitation from my defining axioms, these axioms must contain something which he could deny without self-contradiction. But this has not to do, as he surmises, with time-measurement. I hope I have made it clear in the foregoing that this part of the work involves no empirical appeals. But in my article I admitted that there was one empirical appeal which seemed to be basic—the appeal to the number of spatial dimensions. At certain stages in the analysis which leads to the inverse square law, one has to count up the number of degrees of freedom in the co-ordinates of a particle; this number, 3, ultimately leads after logarithmic integration to an exponent $\frac{3}{2}$ in a denominator which reduces in certain circumstances to r^2, so giving an r^3 which is partly cancelled by an r in the numerator and yields the law of the inverse square. Is this a physical assumption or is it not? Can we show 3 to be the necessary number of spatial dimensions? Larmor once suggested we could, from the mere statement that radiation can be propagated. I am hopeful of establishing it, by my methods, on simpler grounds, from the need for an inner consistency between the argument just described and another place in the argument where a gravitational context arises. I do not claim at the moment that this has been done. I have a shrewd suspicion that it can be done. A seventeenth-century philosopher like Leibniz would say, in his lingo, that there must be a "sufficient reason" for the number of spatial dimensions being 3. In the meantime, until I find that reason, though I concede this ground to Professor Ritchie, I ask not to be judged on the imperfections of my own technique.

E. A. Milne.

NEW BOOKS

An Inquiry into Meaning and Truth. By BERTRAND RUSSELL. (London: George Allen & Unwin, Ltd. 1941. Pp. 352. Price 12s. 6d.)

In his preface Mr. Russell explains that his sympathies as regards method are with the logical positivists, but that he attaches more importance than they do to the work of Berkeley and Hume. The present book "results from an attempt to combine a general outlook akin to Hume's with the methods that have grown out of modern logic." It is valuable as a survey of the modern school of thought which owes its origin very largely to Mr. Russell himself. To the adherents of this school it should prove a work of primary importance, setting forth, as it does, his criticisms of some among his disciples and followers, while at the same time developing his own views in systematic form. As a systematic exposition it is to be recommended also to those whose attitude is more detached: it can be read without much difficulty by those who are not experts in mathematical logic, and it offers the best introduction to a world of new and paradoxical ideas. Needless to say, it is, like all Mr. Russell's writings, characterized by vigour, clarity, and wit.

Mr. Russell himself indicates[1] the theses to which he attaches most importance. In the first place, he maintains that a number of verbal statements are justified on the basis of a single experience, "experience" being taken narrowly as the apprehension of a sense-datum: on this basis I can say "I see a canoid patch of colour," but I cannot say "There is a dog." In the second place, he insists that every assertion has two sides: it "expresses" a state of the speaker and also intends to "indicate" a fact. By analysing what a sentence "expresses" he can find a psychological theory for the meaning of logical words, such as "or," "not," "all," and "some." In the third place, he distinguishes between truth and knowledge, refusing to identify truth with such concepts as "verifiability," which involve knowledge: a proposition may be true although we can see no way of obtaining evidence for or against it. This involves a partial abandonment of the metaphysical agnosticism favoured by the logical positivists. These doctrines lead to views about principles of non-demonstrative inference, views which are difficult to reconcile with pure empiricism; but this problem is indicated rather than discussed, and it is to be hoped that Mr. Russell will treat it fully in a later book.

It will be seen that on the whole these theses mark a reaction against some of the wilder developments of modern theory, and this is borne out by the more detailed discussions. Mr. Russell criticizes such writers as Wittgenstein, Neurath, Hempel, Carnap, and Brouwer in a way which is likely to carry conviction. The criticism of Neurath and Hempel in particular[2] seems to me devastating: it raises the question whether some modern logicians are so specialized as to be ignorant of the most elementary philosophical problems. To pass judgment on this would be unfair without a fuller study of their writings, and perhaps Mr. Russell does not always do full justice to views with which he disagrees; but he is surely right in insisting that "the purpose of words, though philosophers seem to forget this simple fact, is to deal

[1] Pp. 21–2. [2] Pp. 140 ff.

with matters other than words." The modern tendency which reduces all problems to verbal problems and offers verbal solutions to meet real difficulties can be carried to the pitch of absurdity. This brings its own retribution, when would-be ultra-empiricists revert, as Mr. Russell suggests, to ancient metaphysics in the form of a "neo-neo-Platonic mysticism," whose motto might well be "In the beginning was the Word."

Considerations of space prevent me from attempting anything like a synopsis of the argument in a book which is almost embarrassingly rich in ideas. In spite of this richness the book is, in one sense, elementary: its main problem is "the relation of basic propositions to experiences, i.e., of the propositions that come first in the epistemological order to the occurrences which, in *some* sense, are our grounds for accepting these propositions."[1] It is difficult to estimate the value of these elementary or fundamental theories, unless one can envisage the type of structure which is to be erected on these foundations. No doubt Mr. Russell would hold, with some reason, that it is a philosopher's business to get the foundations right first; and certainly no one should blame him for not writing a book other than the one he has written. Nevertheless, if the foundations so laid are incompatible with what we know to be the nature of thought and of what Kant (not Mr. Russell) would call "experience," they would have to be criticized, modified, or even rejected in the light of further knowledge. It is not always clear to me whether Mr. Russell is trying to analyse some (certainly not all) of the elements actually present in developed thought and experience, or whether he is trying to describe the most early, crude, and elementary occurrences out of which developed thought and experience is supposed to grow. Sometimes he appears to be doing one, and sometimes he appears to be doing the other. Any estimate of his success must depend on which he is doing. The first is of greater importance, but can at best be only provisional till the analysis is complete. The second is of less importance and must at best be highly speculative.

Be that as it may, Mr. Russell's work falls into two main discussions, which are to a certain extent intertwined. The first is concerned with the theory of language and the second with epistemology.

On the theory of language Mr. Russell is always suggestive, if not necessarily always convincing. He works by stages from simple problems to more complicated ones, problems of what is now called "syntax."[2] Some of his more simple discussions clear away many prevalent confusions. He is particularly good in his insistence[3] that though we are loosely supposed to utter the same word "dog" on two occasions, in fact we utter two examples of the same species—just as, when we see two dogs, we see two examples of the same species. In the working out of his theory, however, he makes no use of the fact that each uttered word is an individual event as well as an instance of a universal: I should have thought, for example, that this fact at least helped to explain one or his difficulties—how the word "this" can have, in some sense, a constant meaning and yet can designate something different every time it is used. Mr. Russell's own explanation[4] is that when verbal reaction to a stimulus is immediate, we say "this is"; when it is delayed, we say "that was." I am afraid I cannot see how the difficulty is met by saying that "the difference between a sentence beginning 'this is' and one beginning 'that was' lies not in their meaning, but in their causation"; yet this contention is the basis of Mr. Russell's solution of the difficulties

[1] P. 18.
[2] He thinks that better rules of syntax will "automatically" prevent nonsense; p. 170.
[3] P. 24.
[4] Pp. 112–13.

of egocentric particulars, difficulties which arise, I suppose, because he wishes to get rid of any suggestion of a thinking ego.[1]

One of the fundamental doctrines of Mr. Russell's theory of language is that there must be a hierarchy of languages, and that the words "true" and "false," as applied to the statements in any given language, are themselves words belonging to a language of higher order. Hence there must be a "primary language" or "object-language"; and one of the main interests of the book is an attempt to construct a language fulfilling the logical conditions for the language of lowest type, and to show how we can pass from the primary to the secondary language by adding what he calls "logical words," such as "or," "not," "some," and "all," together with the words "true" and "false." The second main interest is the elaboration of the distinction between what an assertion "expresses" and what it "indicates."[2] An assertion has also a third function, namely, to alter the state of the hearer, but this function becomes less and less prominent as the book proceeds.

The theory of language is, I take it, based largely on modern logic: when we come to the epistemology, we find the influence of Hume, although, as I have said above, the two discussions are very much intertwined. We are concerned with such familiar phrases as "truth and falsehood," "truth and experience," "truth and verification"; but all these questions are given, if I may so express myself, a special linguistic twist, so that the argument forms a connected whole.

It is very difficult to give any general description of Mr. Russell's elaborate epistemology. Like Hume, he wishes to insist on the importance of "impressions" or sense-data, differing on this point from some of the logical positivists. Like Hume also, he is distrustful of any ideas not derived from impressions: he will have nothing to do with a self which is more than a bundle of events, and he seems to find no place for the activity of thinking or even of disciplined imagination. Thinking has to be reduced to habit or even to an effect produced, like any other, by some kind of cause.

A special difficulty arises from the fact that Mr. Russell admits two kinds of theory of knowledge.[3] The first kind is purely behaviouristic and is based, he asserts, on science. This studies knowing from the outside as an observable relation between the behaviour of an organism and its environment. Every habit can count as belief in a general law, or even (in a sense) as knowledge of such a law, if the belief happens to be true. The second kind of theory of knowledge is based upon Cartesian doubt: it goes deeper and has greater importance. This second kind is properly called "epistemology": its main task is to begin with those beliefs which, on reflection, appear to us credible independently of argument and to indicate the nature of the inferences by which we pass from these to derivative beliefs. The epistemological order is different from the psychological order, and it is also different from the logical order. Although in a perfected epistemology the propositions will be arranged in *a* logical order, this will not be the logical order which a logician would prefer. The main concern of this book is with the basic propositions in which beliefs are asserted independently of argument and with the relation between these basic propositions and what Mr. Russell calls "experiences."

Mr. Russell recognizes clearly enough the differences between these two kinds of theory of knowledge, and he is well aware of the inadequacies of the first or behaviouristic theory; but he seems to have a persistent hankering

[1] Indeed he seems anxious to avoid any kind of ego. He says (p. 230): "Thus 'I am hot' means 'hotness is a member of the awareness-family of this, and is compresent with this'."

[2] His failure to examine the aesthetic use of language in this connection leads him to assert that "the play *Hamlet* consists entirely of false propositions."

[3] Pp. 12 ff. See also pp. 117 and 131.

after behaviourism, and it is often difficult for the reader to be sure how far he regards these behaviouristic views as essential to his second kind of theory of knowledge, namely, epistemology. We are assured that "the 'implicit behaviour' assumed by Kaplan and Copilowish is exactly what I mean by 'proposition'."[1] Similarly we are told[2] that "two states are instances of the same belief when they cause the same behaviour." A further example of this tendency is the distinction between "this is" and "that was" as given above. Even Hume's doctrines of "habit" seem to take a behaviouristic form. For example, we are told:[3] "To say that we 'know' a percept is to say that it has set up a certain habit in the brain. Only events in the brain can set up habits in the brain; therefore only events in the brain can be known in the kind of way in which we know percepts." Similarly, "understanding a word in virtue of an ostensive definition is merely one kind of habit"; and again, "the difference between an event which is 'experienced' and one which merely occurs is that the former, but not the latter, gives rise to a habit."[4] Examples might be multiplied indefinitely.[5]

I cannot see that these behaviouristic doctrines have anything to do with modern logic; I imagine they would have horrified Hume, so far as such a genial spirit could be horrified; and it is not clear to me how far Mr. Russell himself takes them seriously. But one thing seems to me to be clear, and that is that they are irrelevant to epistemology as described by Mr. Russell. They introduce into his theory a complication (not to say a confusion) which we could well do without.

If we set aside these doctrines as irrelevant, or even ascribe them (as Mr. Russell does the synthetic a priori[6]) to prejudice, the epistemology proper has its value as a reasoned rejection of the extremer doctrines advocated especially by his foreign disciples. Mr. Russell as a philosopher seeks, very rightly, to work out his theories to their logical conclusions, but a kind of English common sense holds him back when he comes to the edge of absurdity. He upholds a correspondence view of truth which refuses to substitute words for reality. He believes that we can accept the law of excluded middle, and that a proposition can be true, although no method exists of discovering that it is so. He grants, perhaps unnecessarily, that the "meaning" of words is limited to "experience," but he maintains that the "significance" of sentences is not so limited. According to him, the whole of the reason for believing a factual premiss, in so far as it is a premiss, is the event to which it refers—not a sentence or proposition or belief. In the end he even believes, though with hesitation, that there are universals; and the result of his whole argument is "that complete metaphysical agnosticism is not compatible with the maintenance of linguistic propositions."

This brief summary of a few among his main conclusions naturally fails to do justice to the subtlety and ingenuity of Mr. Russell's thought. I hope I have said enough to show that this is a book which every philosopher ought to read.

H. J. Paton.

[1] P. 188; but on p. 189 we are told that propositions are to be defined as psychological occurrences—complex images, expectations, etc.
[2] P. 193. Mr. Russell is "not quite satisfied" that this causal definition is adequate.
[3] P. 285. Similarly on p. 339, "The physical and physiological causation of percepts compels us to regard them as all in one region, which must be inside the percipient's head."
[4] P. 296. [5] See, for instance, pp. 313, 247, 291, 297. [6] P. 232.

The Foundations of Empirical Knowledge. By ALFRED J. AYER, M.A., Research Student of Christ Church, Oxford. (London: Macmillan & Co., 1940. Pp. x + 276. Price 10s. 6d.)

This century has seen a succession of works, one per decade, on the epistemology of perception by English philosophers, each of which has carried on the discussion from the point reached by its predecessors. Ayer's admirable work continues the series of Moore's *Refutation of Idealism* (1903), Russell's *Our Knowledge of the External World* (1914), Broad's *Scientific Thought* (1923) and Price's *Perception* (1932); and, like each of these, will serve as the basis of profitable discussion and the jumping-off ground for a further advance. The main excellence of Ayer's book does not consist in any novelty which will surprise those who have taken part in the almost continuous discussion in philosophical circles of perception: it consists in the fact that the first half of the book is an exposition, fuller and more lucid than has been published before, of a solution of the first philosophical problem about perception—that of the status of the "sense-data" with which we are directly acquainted in a perceptual situation, a solution which may well be as final as anything can be in philosophy.

Ayer's thesis may be summarized as follows. The various "theories" of perception that have been proposed—Naïve Realism and its sophisticated modifications, Broad's "sensum" theory, Russell's "logical constructions," Phenomenalism in its various forms—all of which purport to be theories as to the relations between the directly given sense-data and material objects, are not alternative hypotheses as to matters of fact, but are recommendations for different usages of the sense-datum language. The sense-datum language itself is not indispensable: we can, if we like, translate everything in the sense-datum language into a language using not "sense-data" but the notion of "appearing": all that is essential is to distinguish between propositions about material objects that are corrigible and those which, being about their "appearances" or "sense-data," are by their nature incorrigible, indubitable, directly knowable without any possibility of error. The Argument from Illusion does not refute the Naïvest Realism (that if the stick half in water appears bent, it really is bent), provided that we are prepared to admit that the real shape of the stick depends upon such factors as the observer's position. (This would, of course, shock common sense far more than the most radical Phenomenalism.) It is entirely a question of the convenience of the language: the sense-datum language is the most convenient for philosophizing about perception (and also, though Ayer does not mention this, for describing phenomenologically the contents of a sense-field). "But it must be understood clearly that the acceptance of this theory [i.e. the use of the notion of sense-datum] involves nothing more than a decision to use a technical language" (p. 57).

Having decided to use this technical language, we can specify the conventions of this language as we wish. The disputes which have arisen among philosophers as to whether unsensed sense-data exist, whether sense-data can appear to have properties which they lack or can appear to lack properties which they have, etc., are not differences as to matters of fact, but only differences in the conventions which the differing philosophers have imposed on their sense-datum languages. Since the essential distinction is between corrigible and incorrigible propositions, Ayer proposes (rightly, in my opinion) always to adopt the convention that makes propositions about sense-data incorrigible, which also is the convention "that reinforces the distinction between sense-data and material things, in preference to one that would encourage us to confuse them" (p. 131). Thus he decides that his

sense-data shall have those properties, and only those properties, that they appear to have—or, to put it a better way, that the word "appear" (in contrast to "be") shall not occur in sense-datum sentences. A consequence of this decision which will be distasteful to many is that, when I am hit on the head and have the sensory experience described as "seeing stars," but do not know how many "stars" I see, then there is no definite number of "stars" which I am seeing. For "a group of sense-data can be said to be enumerable only if it is in fact enumerated" (p. 125). Ayer's use of the word "group" in this context seems to me to make his doctrine unnecessarily paradoxical. The paradox can be lessened by expressing it in the form that, when I am hit on the head, my visual sense-field becomes one which, though it has no distinct parts, is heterogeneous in the sort of way that makes it appropriate to describe it by a plural noun. When I discriminate distinct parts (e.g., to take a most striking case, when I "resolve" the sound of a note on the piano into a fundamental and harmonics), I am not discriminating parts within a whole which all the time contained these parts undiscriminated, but am changing one sense-field into another. To say that in this case there is a change in my sense-field is of course a convention of language; but to adopt the alternative convention and to say that the sense-field remains the same while I discriminate more things in it would admit the possibility of error (albeit an error of omission) in my knowledge of sense-datum propositions.

Ayer's exposition of the linguistic status of sense-data occupies the first two chapters making up half of his book: in the remaining three chapters Ayer's touch seems to me less sure, and there is more to criticize. Chapter III —"The Egocentric Predicament"—is devoted to the problem of solipsism. Ayer recants his previous behaviouristic solution (in *Language, Truth and Logic*) that propositions about the experiences of another person are merely propositions about that person's bodily behaviour, and suggests that it is a contingent fact that the series of experiences which are my experiences are mine and not another person's, so that "the sense in which the experiences of other persons are inaccessible to my observation is not such as to make the hypothesis of their existence inaccessible to my understanding" (p. 169). I can only say here that I do not think that this is a deep enough solution of the "other mind" problem. Chapter IV discusses "Causality and Perception": the objections to the "causal theory of perception"—that material objects are known to us as causes of sense-data—are well expressed, and there are interesting, but not very profound, remarks on other questions of causation. In the final chapter—"The Constitution of Material Things"—Ayer returns to the relation of the material object language to his sense-datum language. After explaining clearly that a linguistic formulation of Phenomenalism escapes many of the usual objections, he undertakes to show "what are the general principles on which, from our resources of sense-data, we 'construct' the world of material things" (p. 243). Here I feel that his "elementary construction of the material world" is too slight and vague to be very helpful. For example, he says that why a penny is taken to be round and not elliptical, although most of the visual sense-data which it yields are ellipitical, is that the round sense-data are the most "reliable" in the sense that they "have the greatest value as sources of prediction" (p. 267). But obviously we could, if we wished, take an elliptical sense-datum as the "privileged" and "honest" one and make predictions from it: in that case the laws governing the predictions would have to be more complicated. (If the "real" shape of the penny is taken as round, its size may be specified by one parameter and its position on its plane by two, whereas if it were taken as elliptical,

specification of its size would need two parameters and of its plane position three.) The contract is not between predictability and unpredictability, but between relative simplicities of the causal laws. Another example is Ayer's fourth condition for a "permanent possibility of sensation" being "definitive of the continued and distinct existence of a material thing"—namely, that its realization must depend (apart from certain standing conditions) "only upon the movements of the observer" (p. 257). Awareness of these movements, according to Ayer, is "based upon kinaesthetic sensations, supplemented by the evidence of sight and touch"; but he makes no reference, and hence no reply, to the accusation of circularity which has been levelled against this phenomenalist analysis—namely, that it is the real movements of the observer's body, and not merely those which his body appear to him to be making, that make up the condition for the possibility of sensation; and the observer's body is, of course, a material object. This accusation is, in the opinion of philosophers as sympathetic to Phenomenalism as Moore and Price, one of the hardest nuts for a phenomenalist to crack;and it is a serious defect in Ayer's "construction" that he ignores it altogether. (I may be biassed on this point, since I have tried to crack the nut myself.)

Ayer gives the impression of a certain half-heartedness in his attempt to a phenomenalist "construction," a half-heartedness which may be due to the fact that some contemporary philosophers who would agree with the spirit of Ayer's empiricism (e.g. John Wisdom) deny both the necessity and the possibility of such a construction. When we understand that the material-object language is used to refer to what may also be spoken of in a sense-datum language (they would say), that is the end of the matter: the conventions of the material-object language are given by its use, and not by any "construction," "analysis," or "definition" in terms of sense-data. Ayer (like the present reviewer) does not accept this philosophical defeatism: as he says, "there are certain general features about the way in which any expression referring to a material thing applies to phenomena that one can profitably undertake to analyse" (p. 242); but I have the feeling that the existence of the defeatist attitude has weakened Ayer's philosophical "war effort." The whole matter is so difficult that I can here only state dogmatically my tentative opinion that a philosophical "analysis" or "construction" should be regarded as a model set of translation rules which never applies exactly to the relations between two actual linguistic usages, but that the model rules must themselves be precise and logically impeccable to afford much philosophic enlightenment.

My criticisms of the latter part of Ayer's book have been directed to his omissions rather than to his commissions. This book, written in a pellucid style less polemical than that of *Language, Truth and Logic* (1936), is a notable contribution to that resolution of the problem of "our knowledge of the external world" in which British philosophers, in this as in preceding centuries, have particularly distinguished themselves.

R. B. Braithwaite.

God and Philosophy. By Étienne Gilson. (New Haven: Yale University Press. 1941. Pp. xvii + 147. Price 12s.)

I cannot begin a review of a work by M. Gilson without expressing the satisfaction which all his friends and the wider circle of those who know and value his work derive from the assurance which it gives them that at this dark hour in the history of the country which counts him as one of its most distinguished sons he is himself out of the reach of the invader and able to

deliver and to publish these admirable lectures as "visiting professor" on the Mahlon Powell Foundation at the Indiana University. The view which they present of the part which has been played and should be played in philosophy by the conception of God is not new to students of his previous writings; but it is expressed with a characteristic clarity and incisiveness which make the book before us a most welcome summary of conclusions which deserve the closest attention from all students of the philosophy of religion and which appear to the present writer at any rate to be irrefragable. These conclusions it would be impossible to state better than they are stated by M. Gilson himself at the end of his Preface (p. xvii): "It has been my intention to show, on the particular problem of God, that the Christian philosophers have said, owing to the Greeks, things that had never been said by the Greeks themselves; that these things are so intellectually respectable that they have become part and parcel of modern philosophy; and that, though no one can expect science to prove them, we should not mistakenly accept as their disproval by science the failure of some scientists to understand the fundamental problems of metaphysics." These "things" are—that God is, in the phrase which has recently become familiar, "existential," since his primary "name" is not (as to Plato) "the Good" or (as to Aristotle) "Knowledge of knowledge" or (as to Plotinus) "the One," but (as to Moses) "He who *is*," and that the "being" of all else that exists is derived from his, yet not identical with, but "analogous" to his. That this position presents grave difficulties to the metaphysician M. Gilson is very well aware. It must, he says (p. 68), "stretch the power of our essentially conceptual reason almost to the breaking point"; but this "essentially conceptual reason," though always concerned with *what* a thing is, cannot dispense with the assumption *that* it is. This, its *being*, is no predicate or assemblage of predicates, such as any answer to the question "*what* is it?" must always yield, but (p. 69) "the primitive existential act which causes it both to be and to be precisely that which it is"; and its only possible explanation must lie in the affirmation of a supreme cause, no less "existential" than itself, wherein however "essence" and "existence" are no longer divided from one another, but coincide. The doctrine thus offered for our consideration is of course that the classical exponent of which is St. Thomas Aquinas; but M. Gilson, in his Preface, insists that, if he has indeed been guilty, as an opponent might (he confesses) plausibly assert, of "measuring all the other philosophies by the yardstick of Thomism," he would "have committed what appears to" him "personally as the one unforgivable sin against the very essence of philosophy" (p. xii); and in an extremely interesting passage of autobiography he goes on to defend himself against such a charge by telling us that the development of his philosophical opinions was by no means determined from the first by the acceptance of Thomism as the truth in philosophy. On the contrary, it was only after a prolonged study of modern thought under masters so remote from the standpoint of the Angelic Doctor and (it may be added, on M. Gilson's authority) so unfamiliar with his works as Bergson and Lévy-Brühl that he came to find in the system of St. Thomas the key to the solution of problems which had baffled him, and, as it seemed to him, had baffled those later thinkers who had set St. Thomas aside as the representative of a mode of philosophy which had been definitely superseded.

As I have already said, I regard as irrefragable the conclusions stated by M. Gilson in the summary account of his intention in writing the book now under review which I quoted from his Preface. My agreement with him indeed goes farther than that, it extends to the acknowledgment that no philosophy of religion will be found to be satisfactory which does not ascribe to God

"existence" in a sense in which it cannot be ascribed to an "essence" such as can only be predicated of an "existent" being, nor can be inferred from such an essence; although I must add that I am not convinced that St. Thomas did justice to the argument—commonly called "ontological"—of St. Anselm which he rejected. On the problem of the relation of God to the world, again, the theory expressed in the formula that created things have a reality or "being" not identical with but only "analogous" to that of their Creator appears to me to offer a suggestion of the first importance, yet one of which I could not say that I accepted it without qualification. Nor would it be just to expect M. Gilson in this brief statement of his position to deal at length, or perhaps at all, with certain difficulties of which he is unquestionably well aware, but any adequate discussion of which would inevitably tend to confuse the issue and would demand treatment at far longer length than was possible within the limits set by the requirements of his immediate undertaking.

In the autobiographical passage of his Preface to which I have already referred, M. Gilson makes it plain that in his student days his principal teachers were men who approached philosophy from the side of natural science, and that his own interest in natural theology is mainly in the problem of the relation of God to the world as conceived by the natural sciences—an interest which leads him to trace in a masterly manner the development of speculation on this subject in the philosophies which, from Descartes to Kant, intervened between the Christian scholasticism of the Middle Ages and the atheistic or agnostic naturalism of the nineteenth century. For one whose philosophical education was subjected to the influence of a school of thought inspired by the idealistic successors of Kant it is inevitable that the problems of natural theology should present themselves from a somewhat different angle. To him it is natural to feel at least as much concern over the problem of reconciling the religious need for a God who can be *worshipped* with the metaphysical ambition, if not to attain, at least to labour after the vision of all things, oneself included, as included in an intelligible unity; an ambition best illustrated by Hegel's gigantic attempt to set forth in detail the development by an immanent dialectic of the all-comprehending and self-differentiating Absolute Idea. Haunted by the phrase of Spinoza *Quicquid est in Deo est*, he is apt to stumble at the "analogical theory of being" precisely because of the ultimate dualism of Creator and creature which it seems to imply.

He recognizes also that this metaphysical ambition need not be irreligious; that indeed it is often inspired by a genuinely religious passion for union with God which is sometimes in conflict with the no less religious sentiment expressed in Von Hügel's saying that "religion is adoration." In saying all this I am not of course supposing for a moment that I am calling M. Gilson's attention to anything which is not perfectly familiar to him, nor am I complaining that he has not in this book given more space to such questions as perhaps seem more urgent to a person trained in a different school of philosophy than they do to him, but are anyhow not those with which he has here set himself to deal. Nevertheless, when in a footnote on p. 58 he recalls the phrase (taken from the so-called Second Epistle of St. Peter) in which one of the most impressive prayers in the Ordinary of the Mass describes the goal of sacramental communion as being our participation in the divine nature, a reader may feel for one moment, though only for one moment, a vista opened into a whole range of thought which is, in my judgment, most relevant not only to revealed but to natural theology, which yet M. Gilson is, I venture to think, too much inclined to resent for consideration in other contexts.

Some of us, who have learned from M. Gilson himself to appreciate the service rendered by St. Thomas to the emancipation of philosophy from the

fetters of dogma by his clear-cut distinction between the provinces of revealed and natural theology, are nevertheless disposed to think that the gain to philosophy was not without loss to theology; that the general acceptance of that clear-cut distinction was a principal factor in bringing about the subsequent rise of deism; and that what may be called the Augustinian tradition which prevailed in the philosophy of the earlier Middle Ages witnessed to a real epistemological unity which the Thomistic doctrine has tended to obscure.

One or two of M. Gilson's observations in his chapter on "God and Greek Philosophy" seem to me open to criticism. Is it correct to say of Plato (on p. 24) that "not Socrates as Socrates, or Callias as Callias, is truly a real being; in so far as they really are, Socrates and Callias are one and the same thing, namely Man-in-Himself or the Idea of Man"? This was certainly not Aristotle's view; but, in view of the eternal individual souls in the myth of Er and elsewhere, I cannot think that it was Plato's either. The position of "Soul" in his philosophy is not the same as that of the things "between being and not being"; it is the link between the world of appearance and that of the eternal Forms or Ideas. If because "souls" are not "Ideas" they cannot be "real," one would have to say that they were not "real" to the medieval thinkers who, on the authority of St. Augustine, affirmed the existence of Platonic Ideas in the mind of God without prejudice either to the "reality" of individuals or to the higher kind of reality belonging to the essence of God, and therefore (since in God there can be nothing accidental or inessential) to the Ideas in the divine mind. On p. 26 M. Gilson is no doubt right in pointing out that Plato's Ideas were not gods nor was his Idea of the Good God. But he does not note the deliberate monotheism of the *Laws* (though referring in a footnote to the book in which it is expounded), according to which God is the best Soul, the self-moving originator of the motion of heaven or the universe; and is therefore led to make Aristotle more original in this respect than in fact he was.

I should like to end this notice of a most valuable book by calling attention to the remarkable gift—all the more remarkable when exercised in a language which is not his mother tongue—which M. Gilson possesses of putting his points in brief and memorable sentences. The following examples will illustrate my meaning:

"The Greek gods are the crude but telling expression of this absolute conviction that since man is somebody, and not merely something, the ultimate explanation for what happens to him should rest with somebody, and not merely with something" (p. 22). "Every time a lecturer begins a sentence by saying 'As a matter of fact,' you know at once that the man is at his wit's end" (p. 67). "Like the innate Ideas of Plato, Descartes' innate idea of God was a reminiscence; not, however, the reminiscence of some idea contemplated by the soul in a former life, but simply the reminiscence of what he had learned in church when he was a little boy" (p. 82). "A Creator is an eminently Christian God, but a God whose very essence is to be a creator is not a Christian God at all" (p. 88). "The fact that there is no Demiurge does not prove that there is no God" (p. 108). "If Christianity is not mysterious, what is? . . . if the universe of science is mysterious, what is not?"—said, of course, with allusion to the best-known books of Toland and Sir James Jeans (p. 121).

I hope these quotations will tempt my readers to make a first-hand acquaintance with the brilliantly written book from which they are taken.

CLEMENT C. J. WEBB.

Philosophy as a Science: Its Matter and Method. By C. J. Ducasse. (New York: Oskar Piest, Veritas Press Inc. 1941. Pp. xvi + 242. Price $3.)

The first and shorter part of this book is a brilliant critique of opinions which the author does not share regarding the nature and method of philosophy. In seven trenchant chapters, Mr. Ducasse, with a dialectic invariably on its toes, examines representative accounts of philosophy, all different, all up to date, electing for the most part the most eminent recent expositions (such as Russell's or Carnap's) and always the clearest if not the biggest target he can find. It would be difficult, I think, to praise this part of the book too highly. It is the most exciting thing of its kind I have read for a long time. To be sure dialectics for its own sake may sometimes be what it is often supposed to be—a dexterous vanity. No such reproach is possible here; for the combats are always serious and the challenged party is fought in each case with his chosen weapons.

The second part of the book gives the author's own views. Philosophy, he says, is a science. It is would-be knowing, having a definite subject-matter and a method which, intelligently applied, has the general characteristics that science has found to be indispensable. It is *not* the science of nature, or of syntactical forms or of mental facts in general. It *is* the science of appraisals or valuations. And its method is the scientific method of proceeding from "primitives" (the special primitives of appraisal) to explanatory derivatives just as in physics one proceeds from the primitives of sense observation to derivatives like mass or "h." In philosophy's case the "primitives" are said to be "particular, spontaneous, and stated appraisals," and the significance Mr. Ducasse attaches to method is shown in a chapter on that subject which jolts the smoothness of his exposition but is included because it has to be included. Returning to his main theme he attempts to clinch the matter in his three last chapters. He puts his method to the proof as a working method in the case of ethics. Next we have a theory of "norms," and philosophy (we are told) is restored to its ancient status as the love of wisdom (for wisdom is always evaluative and normative). Lastly there is a general review of the book's entire argument with certain supplementary observations.

I think it is true that "wisdom" does imply something like a "norm" of appraisal, and so that etymology and much philosophical tradition lends some support to Mr. Ducasse's claim. That in itself is scarcely decisive; but it may help; and the contentions (*a*) that philosophy *has* a distinctive subject-matter, and (*b*) that wisdom gone scientific is able to be "scientific" is a perfectly straightforward sense seems to me to be of the greatest importance. In the main, both contentions are argued stoutly, and one can come to grips with them. I also think, however, that the exposition at certain critical points is a good deal sketchier than it need have been.

The words "appraise" and "appraisal" are not very common in English and according to the *N.E.D.* they mean "price-fixing." "Valuation" as a philosophical term is notoriously in need of analysis. Therefore I submit that neither the popular nor the technical term is anywhere near being self-explanatory, and I have not found that Mr. Ducasse attempts to explain either with precision. Instead he seems content to illustrate instead of defining, one of his more circumspect efforts being on p. 197, where he says that " 'having value V' stands, as the case may be, for being good, or valid, or erroneous, or sublime, or inexpedient, or holy, or wise, or incorrect, etc." That is scarcely good enough. Again, on p. 174, we are told that philosophy's "primitives" "consist of *certain* appraisals" (Italics mine). Everywhere else,

so far as I have noticed, the statement is just that "appraisals" define philosophy's primitive subject-matter. There is a clear difference between "appraisals" and "*certain* appraisals"; and if *all* appraisals are supposed to be markedly philosophical, I can only say that I have heard a good many at football matches that do not strike me in that way.

Indeed, it looks to me as if we were left to collect the subject-matter of developed philosophy from the syllabus of philosophical departments in universities—e.g. ethics, aesthetics, epistemology, and (a certain kind of) logic—and although Mr. Ducasse is prepared to scrap a good deal that is taught under these names as being not genuine philosophy but something else, I do not find him telling us clearly why all these subjects are philosophical in the parts of them that he would retain. He is particularly unsatisfactory I think in what he says about metaphysics. Most of it, he tells us, consists of pseudo-problems and so should be eliminated like other moonshine. But what is left? As I gather, something about "reality" which, it seems, means "interesting" and is a characterizing predicate. Is not this a trifle casual? Or casual trifling?

While the author's choice of ethics as an exemplary field for showing the resources of his method in action may have certain advantages, I do not find his argument convincing in that field. The relevant "primitives" here are said to be "approvals," specifically limited to individuals or groups at particular stages, and it is suggested (not asserted) that some derivative like "welfare-producing" might introduce coherence into most of the primitive approvals. Now, firstly, "approval" needn't be ethical at all. (Consider committees when they "approve.") Secondly, one might ask why particular individuals or groups might not be content (as so often they seem to be) with a chaotic and capricious jumble of "approvals." The only reason that I can see is that approvals are really *rational* norms in germ. If so, there is much more in "approval" or "appraisal" than meets the eye, and I think it was Mr. Ducasse's business to make it hit us in the eye. In the third place, I do not see how any moralist (seeking a rational "norm") can expect all his primitive appraisals to remain unaltered or how, if he tries to be impartial, his primitives can remain as "particular" as they were at the beginning. Here the author is prepared "to postulate that all persons would spontaneously appraise the same thing alike if they were 'in the same position' "—a large assumption carelessly thrown out, much in the way in which the author nonchalantly amalgamates valuation and obligation.

On p. 31 the author makes a curious slip by referring to Mr. R. G. Collingwood as the "late R. G. Collingwood." JOHN LAIRD.

Democracy: Its Failures and its Future. (The Herbert Spencer Lecture, Oxford, 1941.) By THE RT. HON. VISCOUNT SAMUEL. (London: Humphrey Milford, Oxford University Press. 1941. Pp. 24. Price 1s.)

In this lecture on Democracy Lord Samuel surveys with a wide sweep, and with what may almost be called (in its balanced calm and its even justice) an Olympian range of vision, the problems and the prospects of contemporary democracy. The first and the larger half of his lecture is devoted to an analysis of the causes of democratic shortcomings. Some of these causes he gathers under the head of the impact of science on modern communities: others under the head of an inadequate political technique. In dealing with the impact of science, he is mainly concerned with the economic dislocations produced by scientific inventions and the Second

Industrial Revolution which they have brought about in our days; but he also makes some pregnant remarks on the military developments which are due to scientific progress, and which vitally affect democratic institutions. ("The knight of the Middle Ages, man and horse invulnerable in armour, . . . established the feudal system. . . . The tank column is the knighthood of to-day, the tank both horse and armour.") When he turns to the inadequacies of the political technique of democracy, Lord Samuel draws attention—very justly, because it is the essential crux—to the defects of the party system; he remarks on the failure of many democracies to recognize the necessity of a strong executive government; and he emphasizes the unhappy wedding of the cause of democratic institutions to partial theories, either of *laissez-faire* individualism or of State socialism, which have no inherent connection with democracy, and are really false to its tentative and experimental genius.

The last part of the lecture deals with the future and the hopes of democracy. Here the lecturer, dealing with the true democratic attitude to economic problems, urges that it can never be a matter of *entweder oder*, and that there is "a whole series of possible methods," ranging from complete nationalization to pure private enterprise, each of which is likely to be right in particular instances. On the political issues of democracy he raises the essential question, "How far are individual citizens willing to take part in political action?" That, he urges, is the essential test; and the essential contribution which every man can make to the democratic cause is, in a word, active interest—and perhaps particularly active interest in the maintenance of the party organizations, at once so essential and (if they are allowed to become mechanized) so dangerous to democracy.

Lord Samuel ends with a tribute—quiet, but all the more impressive—to the achievements of our own democracy. "It is often asked whether it is possible for a democracy to govern an Empire. Our democracy does better—it trains an Empire to become a Commonwealth governing itself." One other sentence may also be quoted, recording the judgment of a statesman who has seen British politics at first hand for over forty years. "When at a general election a case has been fairly put, rarely, if ever, does it appear in historical retrospect that, in the circumstances of the time, the verdict was perverse or mistaken."

ERNEST BARKER.

The Structure of Art. By CARL THURSTON. (U.S.A.: University of Chicago Press. London: Cambridge University Press. 1940. Pp. 150. Price 15s.)

Mr. Thurston is one of the many American writers who want a scientific approach to aesthetics. He starts from the facts of aesthetic experience, not from theoretical assumptions about art or beauty, and regards any generalisations that may be made as hypotheses subject to revision in the light of fresh instances. The test of every hypothesis is the success with which it explains or classifies the relevant phenomena. The author is mainly concerned with the "spatial arts," which include the decorative minor arts as well as architecture, painting, and sculpture, though he explores the problem of value in his concluding chapters. He begins by analysing the elementary figures that enter into complex works of art, and shows how their relationships can be resolved into mathematical terms. But he does not regard spatial art as an empty configuration of geometrical designs, and allows association to introduce the kinaesthetic factor dear to the heart of Vernon Lee. "Memories of motion and force are entirely permissible," he writes on p. 36. Later on he adds to the inventory of artistic content yet further items.

His treatment of the minor arts is interesting for its discernment of the degree to which material influences ornament and design. He places architecture, rather curiously, among the decorative arts, because it is subservient to utilitarian purposes; but he admits that its aesthetic value is enhanced by the greater scope it gives the artist for the free exercise of his imagination. His attitude to value is pluralistic and empirical. Beauty, pleasure, representative significance, even the personality of the artist, are legitimate ingredients in a work of art, but they cannot be reduced by logical jugglery to any all-inclusive concept. This approach to the subject is thoroughly sound, and the detailed analysis is often illuminating; but one could wish that the author had delved a little more deeply into the many important problems on which he touches .

LISTOWEL

Books received also:—

O. K. BUROS (Editor). *The Second Yearbook of Research and Statistical Methodology: Books and Reviews.* New Jersey, U.S.A.: Gryphon Press. 1941. Pp. 381.

W. D. ROSS. *John Henry Muirhead.* 1855–1940. London: Humphrey Milford, Oxford University Press. Pp. 10. 1s. 6d.

R. JACKSON. *An Examination of the Deductive Logic of John Stuart Mill.* London: Humphrey Milford, Oxford University Press. 1941. Pp. ix + 193. 10s. 6d.

E. FRAENKEL. *The Dual State: A Contribution to the Theory of Dictatorship.* (Tr. by E. A. Shils, E. Lowenstein and K. Knorr.) London and New York: Humphrey Milford, Oxford University Press. 1941. Pp. xvi + 248. 3 dollars.

D. W. HARDING. *The Impulse to Dominate.* London: George Allen & Unwin, Ltd. 1941. Pp. 256. 7s. 6d.

HERBERT MARCUSE. *Reason and Revolution. Hegel and the Rise of Social Theory.* London, New York, Toronto: Oxford University Press. 1941. Pp. ix + 431. 21s. 6d.

The Renaissance of Asia. (Lectures delivered under the auspices of the Committee on International Relations on the Los Angeles Campus of the University of California, 1939.) Berkeley and Los Angeles: University of California Press. 1941. Pp. x + 169. 9s.

MARION JOHN BRADSHAW. *Philosophical Foundations of Faith. A Contribution towards a Philosophy of Religion.* New York: Columbia University Press. 1941. Pp. x + 254. 16s. 6d.

R. H. STRACHAN, D.D. *The Fourth Gospel: Its Significance and Environment.* London, Student Christian Movement Press. 1941. Pp. x + 345. 10s. 6d.

REGINALD LENNARD. *Democracy: The Threatened Foundations.* Cambridge University Press. 1941. Pp. x + 121. 3s. 6d.

H. V. ROUTH. *The Diffusion of English Culture.* Cambridge University Press. 1941. Pp. vi + 134. 3s. 6d.

INSTITUTE NOTES

On Friday, November 14th, Professor Dingle delivered a lecture entitled "The Universe in Relation to Modern Physics," at University Hall. The lecture was well attended and very highly appreciated.

In January, Professor A. D. Ritchie, of Manchester University, has promised to give an address entitled "Social Relations of Science." Members in the Home Counties will receive a notice of this lecture in due course, and a notice will also appear at the appropriate moment in *The Times*.

OBJECTS OF THE INSTITUTE

The British Institute of Philosophy exists to bring leading exponents of various branches of Philosophy into direct contact with the general public, with the purpose of satisfying a need felt by many men and women in every walk of life for greater clearness and comprehensiveness of vision in human affairs.

With this broad educational purpose in view, the Institute—

(1) Provides at suitable times in the day and evening courses of lectures by leading exponents in the more important subjects coming within the scope of Philosophy. All branches of Philosophy are represented —Ethics and Social Philosophy, the Philosophy of Law and of the Sciences, of the Fine Arts and of Religion, as well as Logic and Metaphysics and Psychology.
These lectures are free to members.
(2) Issues a quarterly philosophical journal (free to members).
(3) Proposes to form a philosophical Library.
(4) Gives guidance and assistance to individuals in their philosophical reading.
(5) Encourages research in Philosophy.

There are Local Centres of the Institute at Bangor, Cardiff, Liverpool, Manchester, Newcastle and Durham, and Sheffield.

Further information and forms of application for membership may be had on application to the Director of Studies, at University Hall, 14 Gordon Square, London, W.C.1.

[*Suggested*]

FORM OF BEQUEST

I bequeath to THE BRITISH INSTITUTE OF PHILOSOPHY the sum of ..... free of duty, to be applied to the purposes of that Institute, and I declare that the receipt of the Honorary Secretary, or other proper officer for the time being of that Institute, shall be sufficient discharge for the same.

CONTENTS

		PAGE
I.	IDEALS AND PRACTICE (I). Professor LEONARD J. RUSSELL	99
II.	THEORIES OF IMMORTALITY. Professor A. D. RITCHIE	117
III.	THE INTELLIGIBILITY OF HISTORY. W. H. WALSH, M.A.	128
IV.	THE NATURE OF TRAGEDY. A. H. B. ALLEN	144
V.	RICHARD PRICE: A NEGLECTED 18TH CENTURY MORALIST. W. H. F. BARNES, M.A.	159
VI.	DISCUSSION: FREEDOM AND PERSONALITY AGAIN	174
VII.	NEW BOOKS	176
VIII.	INSTITUTE NOTES	192

ERRATA:

Prof. A. E. Taylor, *Freedom and Personality Again.*

p. 30, *l.* 19 from below:
inimical should be *universal.*

p. 34, *l.* 10 from below:
simply should be *not simply.*

Prof. C. C. J. Webb, review of *God and Philosophy.*

p. 90, *l.* 3 from below:
for *resent* read *reserve.*

THE BRITISH INSTITUTE OF PHILOSOPHY

Appeal for New Members and Donations

THE Council appeals to members to do all in their power to introduce new members in order to extend the benefits of the Institute and to increase its revenue.

The Institute has no endowments, and its work, which includes lecture courses and meetings for discussion in the various Centres, as well as the conduct of the JOURNAL, cannot be carried on from revenue derived solely from subscriptions of £1 1s. per annum. The Council, therefore, appeals for donations, small or large, from sympathizers with the Institute's aims.

PRINTED IN GREAT BRITAIN
BY UNWIN BROTHERS LIMITED
LONDON AND WOKING